

**Mountainview Power Plant
Application for Certification
(00-AFC-002)**

**Applicant's Analysis
and Stipulation to:**

Necessary Conditions of Certification

(in Compliance with MVPP Committee Order)

August 25, 2000

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EXECUTIVE SUMMARY

INTRODUCTION

Mountainview Power Plant (MVPP) is an operating 132 megawatt natural gas fired electricity generating facility owned by Mountainview Power Company, LLC (MVPC), and is located next to the City of Redlands in San Bernardino County. MVPC has submitted an Application for Certification (AFC) to the California Energy Commission (CEC) for the addition of two new units at the MVPP site.

MVPC submits this document after it conducted an analysis of all necessary conditions of certification that the CEC will require in approving the AFC. MVPC stipulates to the necessary conditions of certification. MVPC believes that the analysis and information contained in this stipulation will facilitate the efficiency of the CEC's determination regarding the MVPP AFC. MVPC also anticipates that this stipulation will enhance the CEC staff's processing other AFCs on a timely and efficient basis.

MVPC appreciates the efforts of the CEC staff in their endeavor to determine Laws, Ordinances, Regulations, and Standards (LORS) compliance and impacts of over fourteen different projects simultaneously.

MVPC takes this opportunity to contribute to its own AFC and to the AFC process in general because:

1. The Committee assigned to MVPP has ordered these efforts; and
2. The CEC staff has diligently and professionally applied themselves to MVPP and fulfilled their duties to analyze and acquire the information needed.

MOUNTAINVIEW POWER PLANT

MVPC anticipates that this stipulation will expedite the AFC review process for MVPP for the following reasons:

1. The project takes place on an existing power plant site.
2. The local government supports the project.
3. No local public opposition has arisen against the project.
4. The project requires minimal linear facilities because of the abundance of existing pipelines and transmission facilities.
5. The project has no direct contact with, and has only minimal impacts on, sensitive or rich biological areas.
6. The project owner will continue to cooperate with the CEC in all respects.

In essence, MVPP is a so-called “vanilla” project in that it presents only minimal complications and raises no new difficult issues. This, combined with the project owner’s open, candid, and cooperative relationship with all parties, public and private, makes such advancement possible.

MVPC hopes that the CEC is able to apply and utilize the concepts and analysis herein to advance other projects going through the AFC process.

APPLICATION FOR CERTIFICATION PROCESS

The AFC process requires that the CEC conduct an analysis to determine whether a proposed project complies with all relevant Laws, Ordinances, Regulations, and Standards (LORS). The process serves as the equivalent of the Environmental Review process that is required under the California Environmental Quality Act (CEQA). In conducting its analysis, the CEC analyzes each project’s impacts according to specific issue categories or “issue areas.” The issue areas appear in Table 1-1 and 1-2 below.

For each issue area, the CEC determines any necessary conditions that the project owner must comply with in order to approve the application. The “conditions of certification” established by the CEC are designed to mitigate potential environmental impacts, satisfy other duties of the Warren-Alquist Act, as well as LORS requirements.

COMPLETE ANALYSIS OF ALL PAST CONDITIONS OF CERTIFICATION

In this stipulation, MVPC presents a complete analysis, organized by issue area, of all conditions of certification required by the CEC for projects recently permitted. The conditions of certification are organized in three categories: standard conditions, categorical conditions, and unique conditions. Essentially every project currently under submission to the CEC is of the same type. Namely combined cycle natural gas power plants. Accordingly, projects of this type receive identical conditions that deal with identical impact or compliance issues. Table 1-1 below lists the conditions of certification by issue area for each category of condition.

**Table 1-2
CONDITIONS FROM PAST PROJECTS**

Issue Area	Standard Conditions	Categorical Conditions	Unique Conditions	Total Conditions
Air Quality	47	3	28	78
Public Health	0	0	3	3
Worker Safety	3	0	0	3
Transmission Line	6	0	0	6

Issue Area	Standard Conditions	Categorical Conditions	Unique Conditions	Total Conditions
Hazardous Materials	3	2	0	5
Waste Management	3	1	3	7
Land Use	5	2	3	10
Traffic and Trans	5	2	3	10
Noise	7	1	0	8
Visual Resources	4	1	9	14
Cultural Resources	14	1	2	17
Socioeconomics	2	0	0	2
Biological Resources	4	7	5	16
Soils and Water	3	2	18	23
Geo and Paleo	8	3	4	15
Facility Design	25	0	0	25
Reliability	N/A	N/A	N/A	N/A
Efficiency	N/A	N/A	N/A	N/A
Trans System Eng.	3	0	0	3
Alternatives	N/A	N/A	N/A	N/A
Totals	142	25	78	245

Table 1-1 shows that in nearly every issue area, there are many standard conditions that have evolved to address the issues that have repeatedly arisen in the standard combined cycle power plants being proposed and built in California.

The CEC and staff have ascertained the need for these conditions through a diligent and meticulous analytical process. MVPC applied the results of this analytical process to evaluate the conditions of certification for MVPP. Specifically, MVPC conducted an impact analysis and then identified potential impacts of the MVPP that are similar to identical impacts in previously permitted projects. The conditions for those previously permitted projects were then “tested” to determine whether they were adequate for the MVPP. Some conditions required modification. Many other conditions, however, provide required compliance or mitigation.

MVPP has drafted proposed conditions of certification to facilitate the CEC staff’s approval process for remaining impacts or LORS compliance issues not evident in previously permitted projects.

ANALYSIS OF NECESSARY CONDITIONS FOR MVPP

After evaluating past conditions of certification, as well as the circumstances that invoked them, MVPC believes that by stipulating to the appropriate conditions as shown in Table 1-2, nearly every issue area has been resolved. In each of these topic areas, MVPC has stipulated to standard conditions of certification set forth in each of the five previously

approved projects. In addition, MVPC will be in compliance with the applicable LORS, and believes that no significant adverse direct, indirect, or cumulative impacts will occur.

**Table 1-2
MVPP ISSUE AREAS AND STIPULATION**

Issue Area	Conditions Stipulated	Unresolved Issues?
Air Quality	0	Yes
Public Health	2	No
Worker Safety	3	No
Transmission Line	2	No
Hazardous Materials	3	No
Waste Management	3	No
Land Use	7	No
Traffic and Trans	7	No
Noise	8	No
Visual Resources	4	No
Cultural Resources	14	No
Socioeconomic	2	No
Biological Resources	7	No
Soils and Water	9	No
Geo and Paleo	8	No
Facility Design	25	No
Reliability	N/A	No
Efficiency	N/A	No
Trans System Eng.	3	No
Alternatives	N/A	No
Totals	107	1 area unresolved

MVPC anticipates that all of these topic areas will be the subjects of workshop discussions. MVPC also anticipates that those workshop discussions may lead to modifications of recommendations and proposed conditions of certification for these topic areas. In addition, MVPC understands that the CEC may recommend mitigation measures to address issues in the topic areas. Nevertheless, MVPC believes that its proactive analysis and stipulation to all necessary conditions will greatly enhance the AFC process and also increase efficiency by streamlining discussions and eliminating unnecessary activities.

UNRESOLVED ISSUE AREAS

Incomplete Stipulation Issue Areas

MVPC considers only the stipulation to Air Quality conditions to be incomplete because of unresolved issues in the Air Quality issue area. Conditions of certification in the Air Quality issue areas are mainly determined from the conditions the regional Air Quality Management District imposes in its determination of compliance. MVPC expects the Preliminary Determination of Compliance (PDOC) no later than mid-September 2000, and does not expect any conditions that MVPC cannot resolve by stipulation. Nor does MVPC expect any outstanding problems to be unresolved in the PDOC.

Outstanding Information to Be Provided to CEC Staff

In several other issue areas, MVPC is completing data responses where mitigation actions are already agreed to in principle. The analysis of this information may lead to the determination of potential significant environmental impacts. If so, MVPC intends to fully mitigate such impacts to less than significant levels. In any case, MVPC is confident that the issue area has been resolved sufficiently by stipulation such that minimal additional time is required to complete resolution.

Biological Resources

In the area of Biological Resources, the primary issue was the potential impacts to the Santa Ana River habitat. Boring under the Santa Ana River has eliminated this issue. Remaining direct impacts are limited to roadways, hard-packed or plowed, terraced property lots, or highly disturbed and modified ground for roadways including the crossing of The Arrow Route over Etiwanda Creek. Indirect impacts are minimal as well. MVPC plans to submit some requested information to the CEC staff regarding Biological Resources shortly. The U.S. Fish and Wildlife Service consultation is not expected to be problematic, nor is the California Department of Fish and Game expected to raise any issues.

Cultural Resources

MVPC is resolving final clarification on several cultural resources impacts issues. However, none of this information is required for further mitigation determination, since MVPC is stipulating to the 14 standard conditions set forth in each of the five previously permitted projects.

Land Use

MVPC is providing answers to several miscellaneous data requests. The primary issue is resolution of the annexation of the property into the City of Redlands. MVPC expects this will be completed in the near future.

Noise

MVPC is answering several data requests in the issue area of Noise, none of which impact conditions of certification.

Soils and Water Resources

MVPC has recently agreed to use contaminated middle aquifer water as a means to eliminate further need for analysis of potential aquifer impacts. This will also resolve any possible conflict with inland water policy. The CEC staff management and experts created a collaboration that brought about these choices on an expedited basis. MVPC also will be submitting several miscellaneous documents and updating a few data requests. None of this information impacts the needed conditions of certification

Transmission System Engineering

MVPC expects Southern California Edison's final analysis for interconnection shortly. MVPC expects no significant changes by the CAL-ISO. MVPC is therefore confident that the stipulated conditions resolve all issues.

Visual Resources

MVPC is completing a promised mitigation plan for visual impacts by users of the possible future Santa Ana River Trail. This plan involves planting trees to screen the view of the plant from the river. MVPC is also completing responses as already agreed upon by the CEC staff. The stipulated conditions include all necessary conditions of certification, and thereby complete MVPC's needed mitigation and LORS compliance in this area.

CONCLUSION

In this document, MVPC has essentially stipulated to every standard condition, all appropriate categorical conditions, and several appropriate unique conditions. Certain issue areas that are not in contention. Other issue areas require only modest effort to achieve closure. MVPC believes that these stipulations will expedite the CEC's decision-making because the analysis that led to the stipulations provides CEC staff with a historical resource guide that will facilitate comparison between MVPP and previously permitted projects. MVPC hopes that this approach will enable the CEC to focus remaining time on important and vital tasks related to advancing the MVPP AFC to a decision.

INTRODUCTION

Mountainview Power Company, LLC (MVPC) submits this analysis and stipulation for a dual purpose. First, MVPC hopes to assist the California Energy Commission (CEC) staff in eliminating unnecessary and duplicative work, and to enhance the CEC's certification decision-making process. Second, MVPC anticipates that its stipulations will allow the CEC to focus remaining scarce resources on true remaining impact and law, regulations, ordinances, standards (LORS) compliance issues that specifically relate to Mountainview Power Plant (MVPP).

MVPC has conducted a thorough analysis of prior power plant projects before the CEC, categorized the conditions of certification for each of those projects, and listed conditions of certification that are consistent with all the natural gas fired, combined cycle, power plants projects before the CEC. MVPP has utilized CEC staff's own analysis, mitigation and compliance requirements, and conditions of certification in similar, and sometimes identical, power plant project issue situations.

MVPC stipulates to all clearly required ultimate conditions of certification that CEC staff is likely to require for MVPP. While MVPC has a specific interest in the certification of MVPP for construction in compliance with LORS, MVPC believes that the analysis and approach herein can and will be transferable to other present and future combined cycle natural gas power plant projects in California.

OVERVIEW

This stipulation is premised on a simple fact: nearly every combined cycle power plant proposed to be built in California has a tremendous amount of similar and identical characteristics that, in turn, require a tremendous amount of similar or identical conditions of certification. This fact is illustrated, simply, in Figure 2.1, below.

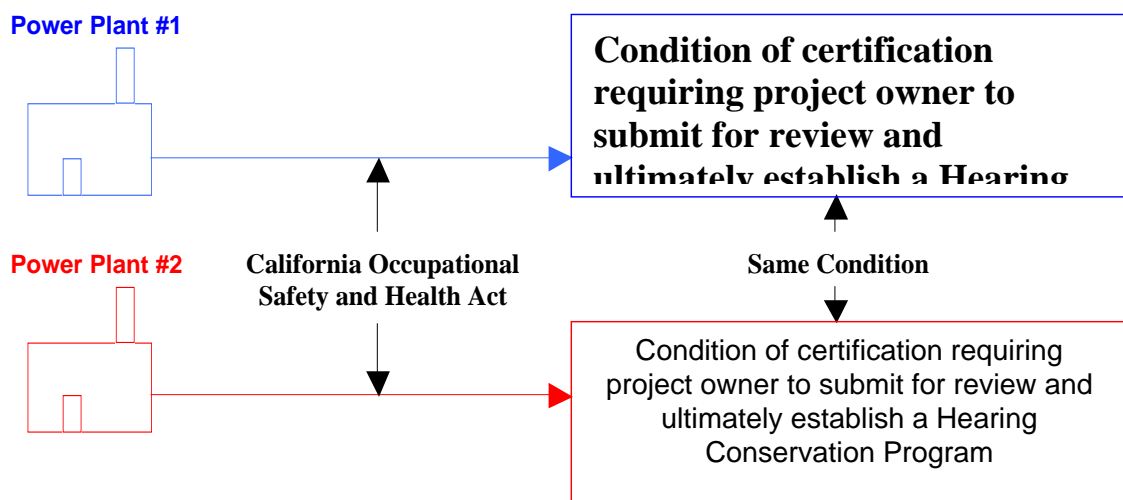


Figure 2.1
Example of Repeated Condition of Certification

In Figure 2.1, two similar, combined cycle natural gas power plants are depicted. Both are subject to the same law, the California Occupational Safety and Health Act, which requires, among other things, a hearing conservation program. Thus, both plants receive an identical condition of certification requiring the project owner to submit and establish a noise control program.

Though simplistic, this example reflects a real identical condition imposed on all five recently permitted power plants in California. It was the third Noise condition of certification in all five projects, La Paloma, Los Medanos Energy Center, High Desert, Delta Energy Center, and Sutter Power Plant. By multiplying this process one hundred fold, the true potential savings of reducing the duplicative process becomes manifest.

Analysis of Past Conditions of Certification

MVPC has conducted an analysis of each and every condition of certification in all five of the recently permitted power plants. That analysis revealed that:

1. Certain conditions were *standard* to all five projects, or nearly all five,
2. Some conditions were *categorical* in nature, that is some common characteristic between two or more projects required the same condition, and
3. There were some *unique* conditions, that only one project had by virtue of a unique circumstance of that project.

Figure 2.3 depicts this process

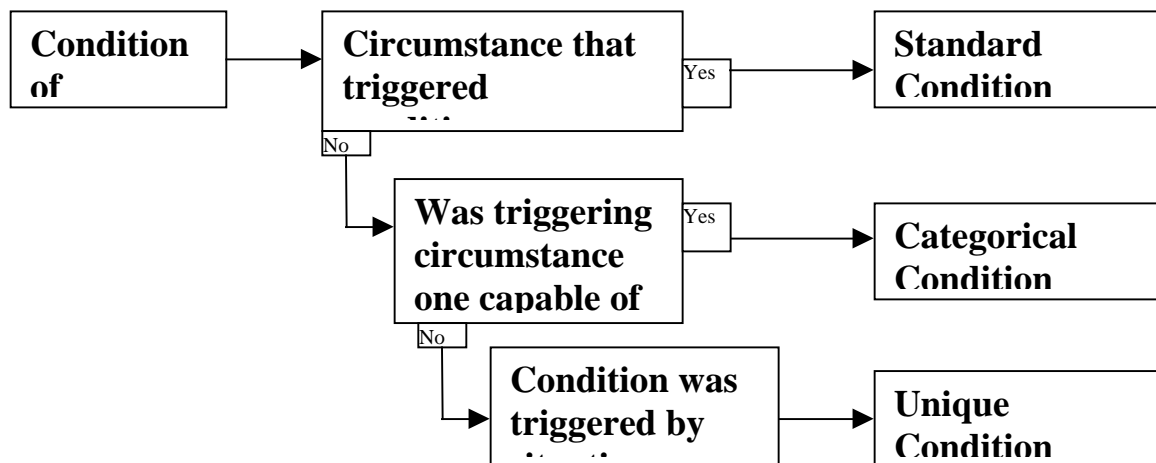


Figure 2.3
Categorizing Conditions

After conducting this analysis, MVPC evaluated the differences and similarities of the five previously permitted projects connected those similarities and differences to the conditions of certification each triggered. In nearly every issue area, there were certain characteristics common to every power plant that triggered identical or substantially similar conditions. Given the degree to which all combined cycle power plants share the same basic characteristics and demand the same resources this outcome is not surprising.

Application to MVPP: Identification of Required Conditions

Realizing that this analysis had great potential to assist in identifying the probable conditions of certification for MVPP, MVPC applied the analysis to MVPP as depicted in Figure 2.2 below.

Figure 2.2 shows a key characteristic of MVPP juxtaposed with the standard conditions required when that characteristic is present. In this case, the characteristic is the potential to disturb cultural resources while digging trenches for the Natural Gas Pipeline that MVPP requires. In all five previously permitted projects that characteristic required the essentially same 14 conditions. Thus, it is likely that MVPP will require the same 14 conditions of certification. On such basis, MVPC has evaluated those conditions for each issue area, and is stipulating to them in this document.

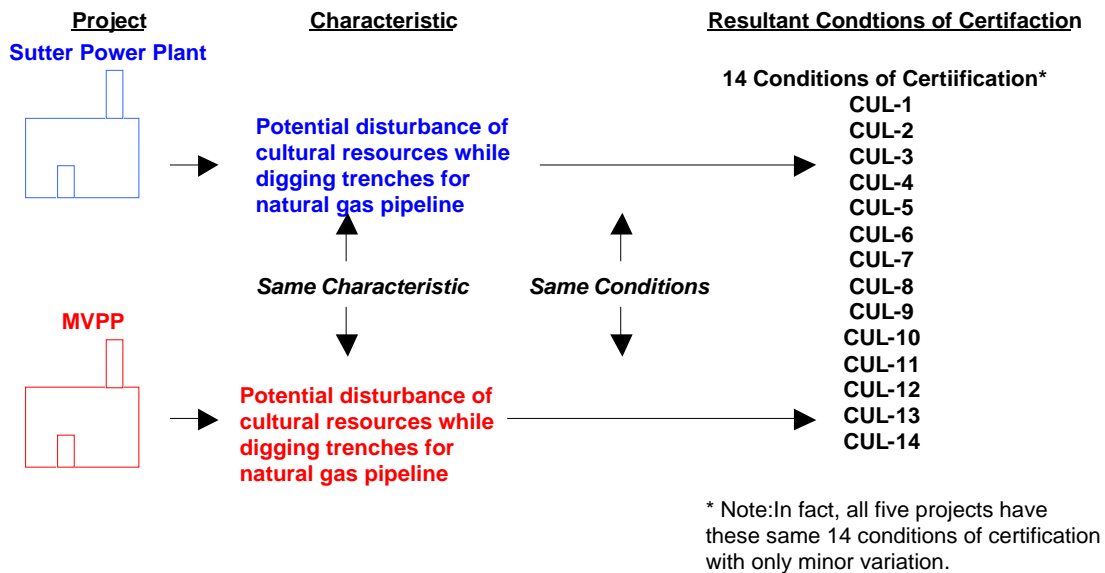


Figure 2.2
Example of MVPP Characteristic Triggering 14 standard Cultural Resources Conditions

NEED TO IMPROVE EFFICIENCY OF CEC AFC PROCESS

Public and policy makers in California are concerned with the condition of California's electricity infrastructure. Much of this concern has been on the lack of new power plants in recent years and the need to efficiently and effectively permit new ones that comply with the law. Significant attention has been given to the CEC Application for Certification (AFC) process.

Twelve Month Process?

The AFC process required to take 12 months from the time the CEC accepts a project as “data adequate” until the time it issues its “Final Decision.” Unfortunately, the time frame has been substantially longer. As Figure 2.3 demonstrates, only 1 of the 5 previously permitted projects was approved within 12 months. Moreover, none of the next six projects accepted by the CEC as data adequate will complete the process in 12 months.

Figure 2.3
AFC Process Times

Project Name	AFC #	Months Since Adequate	Projected Minimum or Actual Finish (Months)
High Desert	97-AFC-1	N/A	29
Sutter	97-AFC-2	N/A	14.5
Los Medanos	98-AFC-1	N/A	12.5
La Paloma	98-AFC-2	N/A	13.5
Delta	98-AFC-3	N/A	12
Sunrise	98-AFC-4	18	21
Elk Hills	99-AFC-1	14	16
Three Mountain	99-AFC-2	13	16
Metcalf	99-AFC-3	14	20
Moss Landing	99-AFC-4	12	14
Otay Mesa	99-AFC-5	10	15

Each of these projects has had many problems, many of which are exacerbated by applicant failure to promptly communicate them to the CEC staff. Nevertheless, it is certainly clear that the AFC process could benefit from any improvements in efficiency. Moreover, those **improvements, which can be done within the existing regulations and laws governing the AFC process**, are capable of being implemented immediately. The pressure to find new efficiencies and refinements of the AFC process will only grow as more AFC's are submitted to the CEC

TIGHTENING THE AFC PROCESS

MVPC believes that by applying and stipulating to appropriate past conditions, the CEC staff's work will be made much easier. Such advancements are made possible by the cooperative nature of stipulating to all potentially applicable conditions. Nevertheless, MVPC understands that the CEC responsibility includes many other tasks. The CEC

must ensure that the project, as proposed and permitted, complies with all applicable LORS. This requires analysis and inquiries where provided information is unclear or inadequate. Further, the CEC staff must await and depend upon other state and federal agencies to complete analysis within their area of knowledge and authority. Finally, the CEC must communicate to the public and accommodate interveners and public participants. The culmination of these responsibilities has clearly overburdened the CEC staff in recent months.

Numerous parties, from the Governor's office to the public citizens have suggested that the AFC process be streamlined. Some actual proposals have been floated about for public scrutiny. Unfortunately, any proposal that fails to grapple with the longest leg of the process will fail to shorten the approval/ disapproval timeframe for projects. In addition, because each project that comes before the CEC includes certain unique characteristics and develops its own major issues and concerns, it is nearly impossible to predict what the longest leg will be.

MVPC's Stipulation

The MVPP AFC was accepted as data adequate on May 17, 2000. Since that time, no local public opposition has arisen to the project. Moreover, MVPC has been working tirelessly to resolve issues with all CEC staff members in all issue areas. Recently, MVPC accepted use of a contaminated aquifer as a means of resolving concerns of the CEC staff regarding water resources use, potential impacts, and inland water policy.

Simultaneously, MVPC has been evaluating potential impacts and LORS compliance issues and endeavoring to self-eliminate them wherever possible. MVPC has investigated and analyzed all previous projects, all of which were natural gas, combined cycle power plants similar to MVPP. For each issue area, MVPC has agreed to adopt all standard conditions and categorical conditions that apply, based on MVPP's own characteristics and the conditions those same characteristics have triggered in other projects. Additionally, MVPC has evaluated past unique conditions and has stipulated to them where appropriate. Finally, MVPC has evaluated remaining issues and has stipulated to new proposed conditions that MVPC feels resolves the issue for purposes of discovery, compliance with LORS, or impact mitigation purposes.

Impact and Effect of MVPC's Stipulation

By stipulating to all needed conditions of certification, MVPC believes that **MVPP is capable of accelerating through the AFC process for these reasons:**

1. There is no local public opposition.
2. The City of Redlands supports the project and has completed a development agreement with MVPC.
3. MVPP involves the repowering an existing facility, eliminating or simplifying many issue areas.
4. The project is located in a load center and is positioned to serve two of the three counties with the fastest growing demand for electricity.

5. The project requires no transmission lines, no water supply pipeline, and only a short water discharge connector pipeline that runs through a golf course and then hangs from a golf cart bridge.
6. MVPP, including its only significant linear feature, a natural gas pipeline, is almost entirely within existing paved surfaces and/ or significantly disturbed and modified terrain, thus significantly reducing impact issues in areas such as cultural resources and biological resources.
7. MVPC has agreed to utilize a cooling water source made up of contaminated water and recycled wastewater.
8. There is no potential taking of listed species or habitat requiring a full biological opinion from the USFWS.
9. By stipulating to the conditions discussed in this document, only a few issue areas still require further developments

PAST PROJECTS AND CONDITIONS BEFORE THE CEC

PAST PROJECTS

Section 3 of this document contains a thorough comparison of each previously permitted project. These projects are outlined in brief form as follows:

High Desert

High Desert (HD) is a proposed power plant located in the northern portion of San Bernardino County. The existing site is an undeveloped desert. HD will be a combined cycle natural gas facility that was permitted in two different configurations using either “F” class Gas turbines or “g” class gas turbines. HD will use selective catalytic reduction (SCR) and dry low NOX combustion technology. HD will utilize ground water for cooling purposes and will require an electrical transmission line and a gas supply pipeline.

Sutter Power Plant

Sutter Power Plant (SPP) is a proposed power plant currently under construction. SPP is a proposed 500 MW facility using “F” class gas combustion turbines. SPP will rely upon SCR for emissions control. SPP will require an electrical transmission line and a natural gas supply pipeline. SPP will also require a natural gas dehydrator. SPP will utilize dry cooling and will also have an onsite sewage treatment system.

Los Medanos Energy Center

Los Medanos Energy Center (LMEC) is a 500 MW combined cycle natural gas facility using “F” class turbines and SCR technology. LMEC will provide steam to a steel plant next to the site and will require an electrical transmission line and water supply pipeline. LMEC will use cooling towers and utilize reclaimed water as the water source.

La Paloma

La Paloma (LP) is a 1,048 MW combined cycle natural gas facility proposed in western Kern County, in an area of declining oil production. LP will require a natural gas

pipeline and water supply line. Wastewater will be injected into the ground while the Kern County Water District supplies water.

Delta Energy Center

Delta Energy Center (DEC) is an 880 MW combined cycle natural gas facility near its sister project Los Medanos Energy Center. DEC will use “F” class turbines and SCR for emissions control. DEC will use cooling towers for cooling with reclaimed water. Water will be returned to the wastewater treatment plant.

CONDITIONS OF CERTIFICATION

The conditions of all five previously permitted power plants are placed in one of three categories, depending on what requires the condition and whether that characteristic, is by its nature, common to all natural gas, combined cycle, power plants (Standard), common to a particular repeating characteristic (Categorical), or unique to the local setting or LORS of the region the project was in (Unique). A more thorough explanation of these three types of conditions follows.

Standard Conditions

A standard condition is one standard to combined cycle natural gas power plants in California. The condition is either driven by a law that all such plants in California are subject to or is driven by a characteristic and its impacts that all combined cycle natural gas power plants have.

As an example, the issue area of Facility Design contains 25 identical conditions for all five past projects. This is because the same exact laws apply to all combined cycle natural gas power plants, and the CEC has developed a uniform, consistent, and efficient way of permitting them in Facility Design terms.

As another example, all five projects have 14 common Cultural Resources Conditions because all projects are subject to the same laws regarding Cultural Resources.

Categorical Conditions

A categorical condition is one that is triggered by a characteristic that repeats itself in more than one of the five past projects or is capable of being repeated. Typically, such repetition is caused by policies or laws that require and allow a project owner to select from a set of options. Certain requirements of natural gas combined cycle power plants, such as the selection of cooling technologies and/or water sources also drive categorical conditions. In each section, where past conditions are presented, the characteristic that triggers a categorical condition is called a “triggering circumstance.”

Unique Conditions

A unique condition is one driven by characteristics local to the project such as local LORS or environmental characteristics.

ISSUE AREAS

In the next sections, MVPC presents an analysis of the past conditions of certification and their applicability to MVPP. Each section contains all past conditions of certification in the issue area. Appendix B contains a complete presentation of all past conditions of certification.

For each issue area, MVPC stipulates to needed or required conditions of certification. MVPC believes that the stipulation for all areas except Air Quality is complete. In the case of Air Quality, the Preliminary Determination of Compliance (PDOC) to be issued by the South Coast Air Quality Management District (SCAQMD) will determine most of the conditions of certification for those areas. MVPC recognizes that it is still responding to data requests in several issue areas. Nonetheless, MVPC believes that the data still outstanding does not predicate any required conditions, and that the conditions stipulation represents all needed and required conditions of certification for that issue area.

PROJECT DESCRIPTION

OVERVIEW

In this section, the key characteristics of the five recently permitted power plants are juxtaposed with MVPP's characteristics. All projects share the basic common design of combined cycle natural gas power plants. A table at the back of this section delineates key characteristics of those five projects.

DESCRIPTIONS OF PAST PROJECTS

SUTTER POWER PLANT

Description of Plant

The Sutter Power Project (SPP) is a 500 megawatt (MW) natural gas fueled, combined cycle, electric generation facility. The proposed 500 MW combined cycle facility will use two 170 MW gas turbine/generators exhausting into two heat recovery steam turbine/generator. Air pollutants in the gas turbine exhaust will be controlled using selective catalytic reduction (SCR) technology. Nitrogen oxide (NOx) emissions from the combustion process will be controlled to 3.5 parts per million.

Site and Region

The SPP will be located adjacent to Calpine's existing Greenleaf Unit 1, a 49.5 MW natural gas fueled cogeneration power plant. The site is located approximately seven miles southwest of Yuba City, on South Township Road near the intersection with Best Road. The SPP will comprise approximately 16 acres of Calpine's existing 77-acre parcel.

Electrical Transmission Line

A new 5.7 mile 230-kilovolt (kV) overhead electric transmission line is proposed to be built to a new switching station, which will interconnect to the Western Area Power Administration's (Western) 230-kv electric transmission system. The new transmission line is planned to be routed south along South Township Road, past O'Banion Road, to the southern end of South Township Road. The route would continue south across open fields, or alternatively, south along murray road to a point of interconnection with Western's system. A new switching station will be constructed to interconnect with Western's System.

Natural Gas Pipeline

A new 14.9-mile natural gas pipeline is proposed for construction to provide fuel for the project. The 16 inch gas pipeline will connect to Pacific Gas & Electric's Line 302, an interstate natural gas supply line located to the west of the SPP site, in Sutter County.

The interconnection will occur at the existing Sacramento River drip station. The Sacramento drip station will be expanded by about 5, 000 square feet to accommodate a new dehydrator.

Water Supply

Project will utilize groundwater for cooling, make-up and potable water needs. Potable water and cooling will be provided by an on-site well system that will be developed as part of the project.

Waste Water

Sanitary waste will be treated by an on-site sewage treatment system. All other wastewater generated in the operation of the plant and the treated effluent will be discharged to the existing surface drainage system requiring a National Pollutant Discharge Elimination System Permit.

LA PALOMA

Description of Plant

The La Paloma Generating Project (LPGP) is a 1,048-megawatt (MW) natural gas-fired, combined-cycle power plant. The power generating facility will consist of four power islands. Each island will be comprised of a combustion turbine generator (CTG), a heat recovery steam generator (HRSG) and exhaust stack, and wet surface cooling condenser.

Site and Region

The LPGP will be located in western Kern County, approximately 40 miles west of Bakersfield and 1.9 miles east of McKittrick. The power plant site is approximately 23 acres in size, and is located within an area of declining oil production.

Electrical Transmission Line

A new bundled 230 kilovolt (kV) double-circuit electric transmission line is proposed to be built to interconnect the project with PG&E's Midway Substation, located northeast of the project site near the community of Buttonwillow. This transmission tie-line is proposed to be from 13.6 to 14.2 miles long, and parallel the existing Midway-Sunset 230 kV and PG&E Diablo-Midway #2 500 kV transmission line. From the Midway Substation, electrical production from the LPGP will be transmitted to users through the existing utility transmission and distribution network

Natural Gas Pipeline

Natural gas supplied by a new pipeline will fuel the project. This pipeline will tap into the existing interstate natural gas pipeline located approximately 370 feet west of the plant site; the existing pipeline is jointly owned and operated by Kern River Natural Gas Transmission Company and the Mojave Pipeline Company.

Water Supply Line

Raw water will be supplied to the facility by the West Kern Water District. To deliver raw water, a new 24-inch diameter pipeline will be constructed from a new turnout on the California Aqueduct. The facility's average hourly water requirement is 5,300 gpm. This equates to an annual average water requirement of 5,500-acre feet. Potable water will be supplied by constructing a 1.5-mile, 6-inch diameter pipeline to connect the plant with the existing potable water supply distribution system operated by the West Kern Water District. The plant's water supply will be secured by entering into a long-term agreement with the West Kern Water District.

Waste Water

Process wastewater consisting primarily of cooling water blowdown from the circulating cooling water system will be disposed by injection wells into the underlying Tulare formation. The injection wells will be classified as either Class I or Class V depending upon the TDS of the water in the underlying formation. La Paloma has obtained a permit from the Department of Oil and Gas to drill a test injection well disposal system and the class of well. It is anticipated that the process wastewater disposal requirements of the project can be met using 2 or 3 injection wells and 1 back up well. The wells will be located on the project site immediately adjacent to it.

DELTA ENERGY CENTER

Description of Project

The Delta Energy Center (DEC) project is an 880 MW, natural gas-fired, combined cycle electric generation facility.

Site and Region

The DEC site occupies about 20 acres of undeveloped land within a 139-acre parcel owned by Dow and will be located in eastern Contra Costa County within the corporate boundaries of the City of Pittsburg adjacent to the City of Antioch border. The site is bounded by the Delta Diablo Sanitation District (DDSD) facilities on the east, Dow Chemical on the north, Dowest Slough to the west, and the Pittsburg-Antioch Highway to the south.

Electrical Transmission Line

A new 3.3-mile, 230 kV electric transmission line will interconnect to the electric transmission system at the existing PG&E substation near the Pittsburg Power Plant. The line will be above ground as it runs in front of USS-POSCO Industries, then will transition to underground. A 0.8-mile underground 13.8 kV line will be built to supply electricity to Dow Chemical.

Natural Gas Pipeline

A new, 5.3-mile natural gas pipeline will be placed in the existing Dow Chemical right-of-way along the Santa Fe Railroad and will connect to PG&E's Antioch natural gas terminal.

Water Supply

Approximately 95 percent of the total water requirements for the DEC are for cooling water that is used to condense steam in the steam turbine. The cooling water is then circulated through the cooling tower to transfer the heat gained from condensing the steam into the atmosphere. The primary source of cooling water is reclaimed effluent (or gray water) from the DDSW wastewater treatment plant. Untreated canal water from the Contra Costa Water District will be the backup water source. The DEC site is adjacent to the DDSW wastewater treatment plant. To deliver wastewater effluent to the DEC, an approximate 500-foot underground pipeline will be constructed from the DDSW Wastewater Treatment Plant to the DEC cooling tower makeup water treatment system. This pipeline will pass beneath Arcy Lane.

Waste Water

A return pipeline to discharge the cooling tower blowdown and other wastewater will be constructed from the DEC to the outfall of the DDSW Wastewater Treatment Plant.

LOS MEDANOS ENERGY CENTER

Description of Plant

The Pittsburg District Energy Facility (PDEF) is a 500-megawatt (MW) natural gas-fired cogeneration power plant in the City of Pittsburg. The facility consists of two "F" class natural gas-fired combined cycle combustion turbine generators (CTG) with a shared steam turbine generator. Each power train will generate 259 MW of electricity. An auxiliary boiler is also available to produce steam. Steam is supplied to the steam turbine generator and to USS-POSCO. As a cogeneration facility, PDEF will provide 75,000 lb/hr of process steam to its steam host, USS-POSCO, and also sell up to 60 MW of electricity to USS-POSCO via a bilateral power sales agreement.

Site and Region

The site is a 12-acre area south of East 3rd Street between Harbor and Columbia Streets. PDEF will also use a temporary 20-acre construction laydown area adjacent to and south of the site. A 115 kV high voltage switchyard will be located on the west side of the site. A Control Room and Administrative Building will be located in the northwest quadrant of the site. The power plant will be located within the corporate boundaries of the City of Pittsburg in eastern Contra Costa County just south of New York Slough. PDEF will construct the project on an existing industrial site currently owned and controlled by USS-POSCO Industries.

Electrical Transmission Line

The transmission system consists of a 115 kV switchyard and an overhead/underground double circuit 115 kV transmission line that will interconnect with PG&E's switchyard at the Pittsburg Power Plant about 2 miles west of the site. A second 1.2-mile single circuit 115 kV transmission line will connect at two existing USS-POSCO substations, east of the site. The one-mile overhead outlet line to the Pittsburg Power Plant will be strung on 75-foot steel tubular poles, placed 300-500 feet apart. The one-mile underground portion of the outlet line will be constructed with solid dielectric cable. The cables will be installed in two separate trenches approximately 6.6 feet deep by 4 feet wide, with a separation of approximately 15 feet between the trenches.

Natural Gas Pipeline

PDEF will construct a new 10-inch diameter natural gas pipeline to PG&E's existing SP5 gas line 3.6 miles southeast of the site. The trench will be 2 feet wide by 5 feet deep.

Water Supply

Disinfected tertiary reclaimed water will be supplied by the Delta Diablo Sanitation District (DDSD) and used for cooling tower make-up, CTG inlet air cooling, and in the HRSGs. A six-cell bank of cooling towers will provide approximately 128,000 gallons per minute (gpm) of cooling water to the steam turbine condensers. The cooling tower basin acts as a reservoir for the cooling water system. Potable water will be supplied by the City of Pittsburg and used for firewater, drinking water, safety showers, sanitary facilities, and as emergency backup to DDSD.

Waste Water

Wastewater outflows from PDEF will be returned to DDSD through a dedicated pipeline. These outflows include cooling tower blowdown, evaporative cooler blowdown, HRSG blowdown, demineralizer water backwash and neutralization facility effluent. This return flow will average about 0.9 mgd. DDSD has adequate capacity to accommodate PDEF's return flow, which will be discharged to the New York Slough outfall. Since the return flow would have previously been treated to tertiary standards, no additional treatment would be necessary before discharge to the outfall. These discharge pipelines are approximately 2 miles long and will travel south from DDSD to Pittsburg-Antioch Highway, travel west to Columbia Street, and then north to PDEF.

HIGH DESERT

Description of Plant

This project has two alternative natural gas-fired design configurations: two combined cycle configurations rate at 720 MW and 678 MW, respectively. The first combined cycle configuration will consist of three "F" class combustion turbines (160 MW each) and three steam turbines (86.5 MW each), and the second combined cycle configuration will consist of two "G" class combustion turbines (236 MW each) and two steam turbines (115 MW each). Other major components include water treatment equipment, inlet air evaporative coolers, HRSGs, steam turbines, cooling towers, SCR and aqueous ammonia

storage and handling equipment, exhaust stacks, continuous emission monitors, control room and administrative building, and set-up transformers. A new electric 230 kV switch yard will be constructed. A dry low NOx combustion technology will be used on the simple cycle configuration to reduce NOx emissions from the combustion process to 9ppm by volume dry, or less, at 15% O2. The combined cycle configurations NOx emission will be controlled with the dry low NOx combustion technology and SCR system to 2.5 ppmvd, at 15% O2.

Site and Region

The HDPP is a 25-acre site located in San Bernardino County, at a site on the former George Air Force Base in the City of Victorville. Associated facilities include a new 230 kV transmission intertie to the existing Victor Substation approximately 7.2 miles away; natural gas fuel supply pipelines; and potable and raw water supply facilities.

Electric Transmission Line

A 7.3-mile transmission line will be built to connect the project with the 230 kV Victor Substation. The line routing will follow existing transmission line corridors where possible. The line will be configured to minimize electromagnetic fields (EMF). New circuit breakers are needed at the Victor Substation.

Natural Gas Pipeline

A 2.75-mile natural gas pipeline will be constructed by Southwest Gas Company to provide fuel for the project.

Water Supply

The Victor Valley Water District will provide potable water. Two sources for cooling water were examined: ground water from future wells to be drilled in the area or from the Mojave River Pipeline Project. HDPP proposed to use State Water Project (SWP) water for its cooling and makeup water needs. The SWP water would be conveyed to the project site via a two and one-half mile long pipeline, which would interconnect with the Mojave River pipeline.

Waste Water

A crystallization process to produce solid waste is proposed. This method converts liquid waste to solid waste for removal.

MVPP PROJECT DESCRIPTION

Description of Existing Power Plant

The existing station consists of two units each rated at 66 gross MW output. These units began operating in 1957 and 1958 respectively. Each existing unit consists of a gas-fired boiler and a steam turbine generator. The boilers and steam turbines are located

outdoors. The steam turbines are three casing, reheat machines, manufactured by General Electric. The natural gas is brought to the site via pipeline.

Description of Proposed Project

MVPC proposes to add two combined cycle units, each containing two GE Model 7FA gas turbine generators producing 319.4 gross MW output each and one steam turbine generator fed from a Heat Recovery Steam Generator (HRSG) capable of 208.7 MW. At ISO conditions, and with duct firing, each combined cycle unit will be capable of producing 542.6 MW gross output for a total project output of 1055.9 MW gross. Each gas turbine-generator will generate 166.7 MW of gross generation under ISO load conditions. The gas turbine-generators' exhaust gases will be used to generate steam in the triple pressure reheat HRSGs. The HRSGs will be supplementary-fired using duct burners to increase plant capacity. Steam from the HRSGs will be admitted to a condensing steam turbine-generator. Approximately 209.2 MW gross generation will be produced by each steam turbine-generator when the gas turbine-generators are operating at ISO load conditions.

Emission controls technology, necessary to meet the proposed air quality standards, will be provided. NO_x emissions will be controlled to 2.5 parts per million (ppm) by a combination of low- NO_x combustors in the gas turbine-generators and SCR systems in the HRSGs. CO emissions will be controlled to not more than 9 ppm using low emissions combustors in the gas turbines and an oxidation catalyst system in the HRSGs.

Project Site

The proposed facility will be located on an existing facility currently being annexed by the City of Redlands in San Bernardino County. The project site consists of a total of 64 acres located adjacent to the Santa Ana River. The existing facility consists of two steam boiler generating units that feed into an immediately adjacent Southern California Edison (SCE) transmission facility and substation. The two existing units utilize groundwater in cooling towers for cooling purposes and provide a nominal gross output of 66 MW each. The proposed new facility will utilize 18.7 already hard-packed or paved acres of the site, mostly in the northern portion of the existing site.

Surrounding Region

The area can be best described as an industrial commercial region with other industrial areas and a mixture of residential and commercial zones nearby. To the North of site lies the Santa Ana River, dry most of the year, which has numerous other industrial and commercial facilities along its side. Directly across the Santa Ana River is the former Norton Air Force Base, now the San Bernardino International Airport. It primarily serves as a commercial airport with large cargo planes flying in and out on a regular basis. The Santa Ana River itself has been highly disturbed, with reinforced or concrete channel banks, numerous surface mining operations going on to the North within the river bed. To the East of the Site lie agricultural land and a water treatment facility. To the South lies agricultural land followed by the Highway -10 freeway. To the west lie commercial, light industrial and residential areas. The residential area is a small enclave to the Southwest of the facility.

No Transmission Line Needed

The System Impact Study performed by SCE indicated that no additional transmission lines were required to interconnect the proposed generation to SCE's transmission grid. Therefore no new transmission lines or transmission line upgrades are required for the interconnection of the proposed generation. MVPC's generation is located in the property adjacent to the 230 kV San Bernardino switchyard and that is the reason that this point was chosen as the interconnection location. Another significant advantage of this plan is that using the local switchyard as the tie-in location requires only a short 230 kV connection between the main power transformers and the 230 kV San Bernardino switchyard.

Natural Gas Pipeline

The gas turbine-generators and duct burners will be designed to burn natural gas. A new 17-mile gas pipeline will be added to ensure gas deliverability to the new units. The pipeline that originates from the SCG line 4000/4002 near Etiwanda Avenue at the western edge of the City of Rancho Cucamonga will follow Arrow Route Highway east for approximately two miles to Cherry Avenue. It will then head south approximately 0.5 miles to Merrill Avenue and travel east along Merrill Avenue for approximately 13 miles to Tippecanoe Avenue where it will go south approximately one mile to San Bernardino Avenue. The pipeline will enter the power plant from San Bernardino Avenue. The pipeline will be laid entirely within existing rights-of-ways of city streets.

A new metering station will be installed at the tie in point at the power plant. The natural gas will be delivered to the plant at approximately 200 pounds per square inch (psig) where new gas compressor units will increase the pressure of the natural gas to at least the minimum 423 psig needed at the combustion gas turbines. Isolation valves will be installed between the two end points of the new pipeline. Pipeline blockdowns (vents) will be installed at each end of the pipeline to depressurize the line for maintenance or repair.

The natural gas line will be a buried line with a minimum 36-inch cover. The pipe will be coated with suitable material and cathodically protected against corrosion. The pipeline design will be designed to uniform building code (UBC) seismic design criteria and per SCG design and construction criteria.

Water Supply

Some existing onsite water supply lines will be re-routed to clear new equipment foundations and a tap will be added to supply water to the new generation facility. Approximately 96 percent of the total water requirements for MVPC Units 3 and 4 are for cooling tower make-up to the circulating water system that is used to condense steam in the steam turbines. The circulating water is then circulated through the cooling towers to transfer the heat gained from condensing the steam into the atmosphere. The other 4 percent of the makeup water is for cycle makeup for the HRSGs, evaporative coolers, and plant general service water.

The primary source of circulating cooling water will be from onsite wells drawing from the middle aquifer and through pipeline deliveries of City of Redlands Waste Water Treatment Plant. MVPC will be able to obtain to 50 percent of its circulating cooling water makeup requirements from the Redlands WWTP. The project will use an existing wastewater supply pipeline that follows Nevada Avenue and San Bernardino Avenue to the MVPC facility.

Waste Water

The plant will operate with minimum discharge with flows up to 200 gpm under abnormal operating conditions. Cooling tower blowdown will be routed to the existing discharge line, which will be extended across Twin Creek Channel by hanging from a golf bridge and trenching in a golf course to the eastern terminus of the SARI pipeline. The SARI pipeline is a permitted “brine” line that follows the Santa Ana River drainage through San Bernardino, Riverside, and Orange Counties and terminates at the Orange County Sanitation District’s Fountain Valley Wastewater Treatment Plant. Wastewater is treated at the facility and then discharged to the Pacific Ocean via a permitted ocean outfall pipeline. All plant wastewater will be collected in a tank or sump and recycled to the cooling tower. Miscellaneous wastewater, which could potentially contain oil and grease, is first treated in an oil/water separator prior to being recycled.

Wastewater from the power cycle makeup water treatment system will consist of the reject stream from the reverse osmosis (RO) units that will initially reduce the concentration of dissolved solids the multi-media filters upstream of the RO units. The RO reject stream will contain the constituents of the plant raw water to coagulate suspended solids prior to filtration. These chemicals are used to eliminate free chlorine that would damage the RO membranes. The filter backwash water will contain the suspended solids prior to filtration, and to adjust pH to control scaling of the membranes. The filter backwash water will contain the suspended solids removed from the raw water and residues of the coagulant used to enhance filtration efficiency. These waste streams will also be recycled to the wastewater storage facilities and then to the cooling tower basins.

KEY CHARACTERISTICS

Common Characteristics

All five previously permitted projects and MVPP share fundamental and similar characteristics, these include:

1. All are combined cycle natural gas power plants.
2. All require a natural gas pipeline.
3. All require a supply of cooling water.
4. All are utilizing best available control technology for air emissions.

All these plants are of essentially the same design most differences are driven by differences in the site and surrounding region. Below is an outline of key characteristics for MVPP.

Outline of Key Characteristics

The projects differ between their other characteristics. For instance, La Paloma, Sutter and High Desert plants are located in sparsely populated areas, whereas, Delta Energy Center, Los Medanos Energy Center and MVPP are located in more densely populated regions. Below an outline of key project characteristics that should be considered for every power plant project is presented:

- A. Proposed Power Facility
 - 1. Power Platform Description
 - 2. Cooling Design
 - 3. Emissions Control Design
 - 4. Wastewater Design
 - 5. Project Site and Land Use Issues
 - 6. Air Quality Issues
 - 7. Public Health Issues
 - 8. Worker Safety Issues
 - 9. Transmission Line and Safety Nuisance Issues
 - 10. Hazardous Materials Issues
 - 11. Waste Management Issues
 - 12. Noise Issues
 - 13. Visual Resources Issues
 - 14. Cultural Resource Issues
 - 15. Socioeconomic Issues
 - 16. Biological Resource Issues
 - 17. Soils and Water Resources Issues
 - 18. Geology and Paleontology Issues
 - 19. Facility Design Issues
 - 20. Reliability Issues
 - 21. Efficiency Issues
 - 22. Transmission Interconnection Issues
- B. Surrounding Region
 - 1. Description of Type of Use
 - 2. Population Density
 - 3. Environmental Justice and Socioeconomic
 - 4. Air Quality Issues
 - 5. Public Health Issues
 - 6. Traffic Issues
 - 7. Noise Issues
 - 8. Visual Issues
 - 9. Cultural Resources Issues
 - 10. Biological Resource Issues
 - 11. Soils and Water Resource Issues
 - 12. Geology and Paleontology Issues
- C. Transmission Line
 - 1. Description of Transmission Line
 - 2. LORS Compliance
 - 3. Transmission Line and Safety Nuisance Issues

4. Transmission Safety Engineering Issues
5. Land Use Issues
6. Traffic (construction)
7. Noise (construction)
8. Visual Resource Issues
9. Cultural Issues
10. Socioeconomic Issues
11. Biological Resource Issues
12. Soils and Water Resource Issues
13. Geology and Paleontology Issues
- D. Gas Supply Pipeline
 1. Description of Gas Supply Line
 2. LORS Compliance
 3. Air Quality Issues
 4. Public Health Issues
 5. Worker Safety and Fire Protection Issues
 6. Hazardous Materials Issues
 7. Waste Management Issues
 8. Land Use Issues
 9. Traffic (construction)
 10. Noise Issues
 11. Visual Resource Issues
 12. Cultural Resource Issues
 13. Socioeconomic Issues
 14. Biological Resource Issues
 15. Soil and Water Resource Issues
 16. Geology and Paleontology Issues
 17. Alternatives Issues
- E. Water Pipeline #1
 1. Description of Water Pipeline
 2. LORS Compliance
 3. Air Quality Issues
 4. Public Health Issues
 5. Worker Safety and Fire Protection Issues
 6. Hazardous Materials Issues
 7. Waste Management Issues
 8. Land Use Issues
 9. Traffic (construction)
 10. Noise Issues
 11. Visual Resource Issues
 12. Cultural Resource Issues
 13. Socioeconomic Issues
 14. Biological Resource Issues
 15. Soils and Water Resource Issues
 16. Geology and Paleontology Issues
 17. Alternatives Issues

- F. Water Pipeline #2
1. Description of Water Pipeline
 2. LORS Compliance
 3. Air Quality Issues
 4. Public Health Issues
 5. Worker Safety and Fire Protection Issues
 6. Hazardous Materials Issues
 7. Waste Management Issues
 8. Land Use Issues
 9. Traffic (construction)
 10. Noise Issues
 11. Visual Resource Issues
 12. Cultural Resource Issues
 13. Socioeconomic Issues
 14. Biological Resource Issues
 15. Soils and Water Resource Issues
 16. Geology and Paleontology Issues
 17. Alternatives Issues

SUMMARY OF MVPP KEY CHARACTERISTICS

Proposed Power Facility

MVPP utilizes a standard, efficient and reliable design, the natural gas, combined cycle power plant. MVPP is utilizing BACT in choosing SCR and an oxidizing catalyst to control air emissions. MVPP is utilizing cooling towers supplied by non-potable water and is discharging all wastewater to a fully permitted brine line. By utilizing an existing power plant site in an industrial setting MVPP had minimal interaction sensitive species or habitat. MVPP has a development agreement with the City of Redlands and is cooperating with the CEC staff to ensure visual and traffic impacts are minimized through design and mitigation.

Surrounding Region

MVPP is proposed on an existing power plant site and has a Development Agreement with the City of Redlands. Air Quality and Public Health issues are fully addressed by The South Coast Air Quality Management District's, Determination of Compliance process and MVPP's waste and safety plans. The Santa Ana River is adjacent to the power plant, however, there will be no impacts to sensitive species or habitat and minimal impacts to Biological Resources, and by following an approved Biological Resources Mitigation Implementation Management Plan (BRMIMP). Visual Resources are being addressed through a tree-planting plan for assurance that if the Santa Ana River Trial comes to fruition in the MVPP area, MVPP will not disturb users of the trial.

Transmission Line

MVPP does not require a transmission line and hence, there are no impacts or compliance issues in this area.

Gas Supply Pipeline

MVPP will utilize a 17-mile gas pipeline to supply natural gas. Fortunately, the gas pipeline will be placed in city streets and right-of-ways on previously disturbed soil. Two potential Biological Resource impact issues have been addressed. At the Santa Ana River the gas pipeline is being bored underneath. Two bore pits will be dug in disturbed soil regions north and south of the river. At Ediwanda Creek the pipeline will be adjacent to Arrow Route and with the Arrow Route right-of-way. The pipe will pass underneath a concrete channel. The only soil disturbed will be previously disturbed areas surrounding the Arrow Route crossing. The Final BRMIMP will address and include all necessary and required measures.

Other impact and compliance issues have also been resolved. In Cultural Resources thirteen (13) known resources have been identified and appropriately prepared for in Visual Resources any permanent above ground features will be constructed with appropriate enclosures. Temporary impacts such as Visual, Noise, and Traffic have been addressed and minimized or mitigated as appropriate.

Water Supply Pipeline

By utilizing an existing water line, reclaim water delivery to the site will not require a new pipeline. For this reason, there are no impact or compliance issues in this area.

Water Discharge Pipeline

By utilizing an existing pipeline the only pipeline needing construction is inside a golf course and over Twin Creek on a golf bridge. For this reason there are no impacts or compliance issues associated with this area.

CONCLUSION

MVPP project description, characteristics and associated issues present no significant or unmitigated impact issues or compliance problems. The conditions stipulated to in this document would ensure that MVPP is in full compliance with all LORS.

KEY CHARACTERISTICS OF PROJECTS

AREA	SPP	LP	DEC	LM	HD	MVPP
Surrounding Area	Agriculture	Declining Oil Fields	Industrial/ Unused Land	Industrial	George Air Force Base	Industrial/ Commercial/ Agricultural
Capacity	500 MW	1048 MW	880 MW	500 MW	720 MW or 678 MW	1060 MW
Cooling System	Dry Cooling	Wet Surface Cooling Condenser	Cooling Towers	Cooling Towers	Cooling Towers	Cooling Towers
Water Source	Ground Water	California Aqueduct (Potable Water)	Reclaim Water	Reclaim Water	Ground Water	Reclaim Water and Contaminated Ground Water
Emission Control Technology	SCR	SCR or SCONOX	SCR	SCR	SCR	SCR
Water Supply Line	None (Onsite Wells)	1.5 Mile	500' connector from WWTP	500' connector from WWTP	.5 Mile connector from SWP	"NONE"
Waste Water	Sanitary onsite all other discharged to surface via NPDES	Ground Injection	500' connector from WWTP	500' connector from WWTP	Crystallization process	Discharge to existing line to fully permitted facility
Gas Transmission Pipeline	14.4 Mile Pipeline Dehydrator	370' Connector Pipeline	5.3 Mile Connector Pipeline	3.6 Mile Connector Pipeline	2.75 Mile Pipeline	17 Mile Pipeline
Electrical Transmission Line	5.7 Mile Overhead 230kV Line	13.6 to 14.2 Mile Overhead 230 kV Line	3.3 Mile Overhead 230kV Line	Overhead/ Under Ground Lines –see description	7.3 Mile Overhead 230kV Line	"NONE"

NEED CONFORMANCE

The Mountainview Power Company (MVPC) Application for Certification (AFC) was accepted on May 17, 2000. Prior to January 1, 2000, Public Resources Code section 25523(f) and 25524(a), prohibited the Energy Commission from certifying a power plant unless the Commission made a finding that the facility was found to be in conformance with the Commission's integrated assessment of the need for new resource additions¹. The Public Resources Code directed the Commission to conduct and "integrated assessment of need," taking into consideration 5 to 12 year forecasts of electricity supply and demand, as well as various competing interests, and to adopt the assessment in biennial electricity report.

On September 28, 1999, Governor Gray Davis signed Senate Bill No. 110, which became Chapter 581, Statutes of 1999. This legislation repealed Public Resources Code sections 25523(f) and 25524(a) and amended other provisions relating to the assessment of need for new resources. It removed the requirement that the Commission make a specific finding that the proposed facility is in conformance with the adopted integrated assessment of need. Regarding need-determination, Senate Bill 110 states:

“Before the California electricity industry was restructured, the regulated cost recovery framework for power plants justified requiring the commission to determine the need for new generation, and site only power plants for which need was established.”

The Commission, however, has always been charged with the obligation to ensure that its siting process promotes the establishment of reliable power for California. SB 110 affirms this obligation.

In two recent reports², the CEC staff articulated a need for new generation sources in Southern California to meet the anticipated growth in electricity consumption, and to ensure reliability. By making available additional electricity capacity to serve load centers in Riverside, San Bernardino and (to some extent) Los Angeles counties, the Mountainview Power Plant (MVPP) project will serve to further these goals with respect to these counties specifically, and for Southern California in general.

¹ See e.g. Section 7 of SB 110, amending Public Resources Code section 25523, pertaining to the Commission's written decision on an application for certification. Section 7 of SB110 expressly removed the requirement that the decision contain an express finding that the project conforms to the integrated assessment of need.

² 1998 Baseline Energy Outlook (CEC staff report [hereinafter "1998 Baseline Report"]) and High Temperatures and Electricity Demand, an Assessment of Supply and Adequacy in California – Trends and Outlook (CEC staff, July 1999 [hereinafter "Heat Storm Report"]).

The 1998 Baseline Energy Outlook Report has Anticipated Increased Electricity Consumption

In August 1998, the CEC staff issued its report entitled “1998 Baseline Energy Outlook - Staff Report.” This report was intended in part to summarize electricity and retail natural gas consumption forecasts for the 10-year period 1997 to 2007. The 1998 Baseline Report included among its principal conclusions that:

- Statewide electricity consumption was expected to increase 1.8 percent per year through 2007; and
- San Bernardino and Riverside Counties (along with Kern County) would experience the largest percentage increases in electricity growth during the 10-year period between 1997 and 2007, and Los Angeles would remain the largest consuming county, accounting for one-fourth of electricity consumption in the state.

In its analysis, the CEC staff noted that California is one of the largest electricity consuming states in the United States, second only to Texas. In this regard, California’s statewide electricity consumption reached 246,255 gigawatt-hour in 1997, the second consecutive year that electricity demand grew in excess of 2.9 percent when compared to the previous year.

The 1998 Baseline Report also reviewed energy consumption by county. In this regard, staff noted that the 9 largest counties in California accounted for 69 percent of all electricity consumed in the state in 1997. Moreover, seven of the 58 counties consumed at least 10,000 gigawatt-hour of electricity, “with Los Angeles being the largest by far,” accounting for about one-fourth of total statewide electricity consumption.

The 1998 Baseline Report also forecasted projected electricity load growth levels by county over the ten-year period 1997 to 2007. The CEC staff predicted that, among California’s 58 counties, San Bernardino County would be second in electricity consumption growth, with a 2.49 percent expected annual growth rate per year. Riverside County would be third in electricity consumption growth (with a 2.45 percent change per year), and Imperial County would be seventh (with a 1.91 percent annual growth rate).

The 1998 Baseline Report also noted that “[a]t least as important as forecasts of electricity consumption are forecasts of peak demand.” In this regard, the report stated that “California’s electricity demand typically peaks on a day in August between the hours of 3 and 5 p.m. It is usually driven by the larger-populated areas which have the widest variation in temperatures, namely most of the SCE service territory and the Central Valley (San Joaquin and Sacramento Valleys).” The 1998 Baseline Report further indicated that “peak demand is expected to increase 1.7 percent per year, slightly lower than electricity consumption, from 46,505 MW in 1997 to 54,566 MW in 2007.”

The 1998 Baseline Report documents anticipated electricity growth and peak demand needs generally within Southern California, and specifically within San Bernardino,

Riverside, and Los Angeles counties. By bringing additional generation capacity on line, the MVPP project will assist in meeting the needs outlined in the 1998 Baseline Report.

The CEC Staff's July 1999 Heat Storm Report Highlights a Need for Significant New Generation Sources to Maintain Adequate Reserve Capacity

In July 1999, the CEC staff released its report entitled "High Temperatures & Electricity Demands: An Assessment of Supply and Adequacy in California – Trends & Outlook," commonly referred to as the "Heat Storm Report." This report was precipitated by events during the summer of 1998, when temperature levels and electricity demands caused the California Independent System Operator to issue several calls for Stage II alerts, signaling that operating reserves had fallen below 5 percent. (A Stage II alert indicates that the Cal-ISO would not be able to maintain a 15 percent operating reserve unless interruptible load customers are curtailed.) One of the CEC staff's primary purposes in undertaking the analysis was to determine whether the summer of 1998 was a unique event in terms of recorded temperatures or whether the summer of 1999 experience indicated that electricity supplies had not kept pace with demand growth. While the CEC staff's examination of historical temperature data did reveal that the summer of 1998 was a unique 1-in-40 year occurrence, the CEC staff reached significant and startling conclusions with respect to electricity reliability:

- "In the absence of significant amounts of new generation capacity being added in the Southwest, less generation will be available from this region for export to California in the coming years. *The State will, therefore, become increasingly more dependent upon imports from the Northwest to meet summer peak loads*";
- "The combination of deregulation of the generation market throughout the rest of the Western Systems Coordinating Council and low reserve margins will result in increased regional competition for available generation in the Western systems Coordinating Council. *Therefore, historical levels of imports into California from both the Southwest and Northwest cannot be relied upon to be available in the future*";
- "Continued load growth in California in future years means higher peak demands. The staff's forecast of peak demands for the summer of 1999 under low probability temperature scenarios became forecasts of peak demand under high probability temperature scenarios in future years. By 2002, the expected peak demand for the California Independent System operator control area will be equal to the peak demand in the staff's 1-in-5 year scenario. By 2004, the expected [Cal-ISO] peak demand will equal the peak demand in the 1-in-40 year scenario. *Without additional generation being added in these years, the probability of frequent Stage II alters during the summer peak demand period becomes greater.*"

The staff noted that the North American Electric Reliability Council, in its "1999 Summer Assessment" report, came to the same conclusion reached by the CEC staff in its assessment of supply adequacy in the California-Mexico and the Desert Southwest region

of the Western Systems Coordinating Council. The North American Electric Reliability Council found that capacity shortfalls in these regions would be likely under two conditions: (1) extreme temperatures during the summer peak demand season and (2) above average number of forced outages of generators. The North American Electric Reliability Council had also noted that demand growth in the west was outpacing new generation additions.

In addition, with respect to interruptible customer loads, the Heat Storm Report noted that “[w]ithout significant amounts of new generation capacity being built in California, reserve margin levels will remain low, increasing the likelihood that interruptible load customers will be asked to curtail consumption during the summer peak demand season. Interruptible load customers that choose not to curtail consumption will adversely impact system reliability.”

Moreover, with respect to potential generator outages, the staff report noted that “[a]ge is a significant factor in a power plant’s reliability. As they age, power plants require more maintenance and are more prone to forced outages. In California, almost half of the installed generation capacity in the State is comprised of oil and natural gas-fired combustion turbines, steam turbines, combined cycle and cogeneration units. Of that total, 61 percent (15,818 MW) is thirty years old or older.”

In its discussion of future load growth, the CEC staff noted that load growth in the Southwest, especially in the Southern Nevada region and Mexico, was expected to be significantly greater than load growth in California.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Federal

No applicable federal LORS are associated with the issue area of Need Conformance.

State

The Warren-Alquist Act, Division 15 of the California Public Resources Code

Senate Bill 110 (1999); Ch. 581, Stat. 1999.

Public Resources Code section 25523(f) and 25524(a) (repealed by SB-110).

1998 Baseline Energy Outlook –CEC Staff Report

High Temperatures & Electricity Demands: An Assessment of Supply and Adequacy in California – Trends & Outlook,” commonly referred to as the “Heat Storm Report.” (July 1999)

Local

No applicable local LORS are associated with the issue area of Need Conformance.

CONCLUSIONS

Because California in general lacks adequate electricity generation capacity, MVPP is a needed project that helps fill the demand for increased capacity. Moreover, MVPP is a lode center project providing relief to electricity demands of the San Bernardino Valley and Eastern Los Angeles cities.

AIR QUALITY

This section presents a comprehensive analysis of Air Quality issues, both in previously permitted projects and in the case of the Mountainview Power Plant (MVPP)³. Previously permitted projects, all combined cycle, natural gas plants, are analyzed for their standard, categorical and unique conditions as well as what triggered each categorical and unique condition. Then, MVPP is juxtaposed with past projects allowing necessary conditions to be identified. A complete review of applicable laws, ordinances, regulations and standards (LORS) and the setting of the MVPP is presented.

Because nearly all Air Quality conditions are dependent upon and flow from Air Quality Management District (AQMD) analysis, much of this analysis is a representation of what conditions are to be expected from the SCAQMD. Ultimately, however, stipulations to most Air Quality conditions require waiting for the PDOC from SCAQMD. When the PDOC is released, MVPP will submit a supplemental stipulation pertaining to all air quality conditions needed.

OVERVIEW OF AIR QUALITY ISSUE AREA

In this analysis, conditions related to air quality are presented in four categories:

**construction conditions;
commissioning conditions;
operational conditions; and
miscellaneous air quality conditions.**

Conditions, as they have been imposed in the past five previously permitted projects, are assigned to one of those four categories. In addition, sub-categories are used in the third category, operational conditions, to further organize air quality conditions. Overall, 47 standard, 3 categorical, and 28 unique conditions are identified.

Construction Conditions

Constructional conditions are those conditions imposed for the purpose of ensuring compliance with standards set by the California Energy Commission, (CEC) as construction activities are not usually regulated by the local air district.

³ As in all the sections of this document, abbreviations are used for the last five permitted projects before the California Energy Commission. Those abbreviations are:

SPP = Sutter Power Plant
DEC = Delta Energy Center
LM = Los Medanos Energy Center
HD = High Desert
LP = La Paloma

Commissioning Conditions

Commissioning conditions are related to initial plant commissioning activities.

Operational Conditions

Operational conditions are those conditions related solely to the operation of a power plant. Operational conditions logically fall into one of six types of sub-categories. They are as follows:

Best Available Control Technology (BACT): BACT conditions establish short-term emission limits, expressed as concentrations (ppm, lbs., or MMBtu) for all new or modified equipment. These conditions are based on the levels proposed by the project.

Emission Limits (hourly, daily, monthly and annual): Emission limits conditions set emission limits for various averaging period of time. Each condition applies to a particular pollutant and ensures that the project's operations are consistent with the information provided by the proposed project owner throughout the AFC process.

Start-up Emission Limits: Start-up emission limits conditions set limits on the duration and emissions of start-up and shutdown activities. These limits are set to ensure that the project's emissions are consistent with the dispersion modeling analysis performed.

Offset Requirements: Offset requirements specify when and in what manner various offset requirements must be satisfied (e.g., deadlines for surrendering certificates).

Toxics Emission Limits: Toxics emission limits conditions specify emission limits for particular toxic air contaminants. They require the preparation of an updated health risk assessment if periodic source tests indicate that the limits are not being achieved.

Monitoring and Reporting Requirements: Monitoring and reporting requirements conditions specify the requirements for continuous emissions monitoring for pollutants such as CO and NOx. Source testing is required for data collection and retention.

Miscellaneous Conditions

Miscellaneous conditions include air quality conditions not falling in the 3 categories above. Often these are CEC mandated conditions.

STANDARD AIR QUALITY CONSTRUCTION CONDITIONS

Construction conditions deal with air quality issues associated with construction activities. Most of these are not regulated by the AQMD. There are four standard construction conditions.

STANDARD AIR QUALITY CONSTRUCTION CONDITIONS
Table 5-1

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-AQ-1	Fugitive dust control plan	Yes
STAN-AQ-2	Prevention and Removal of Track-out	Yes
STAN-AQ-3	Heavy Equipment Maintenance	Yes
STAN-AQ-4	General Construction Mitigation Measures	Yes

STAN-AQ-1:

[LM-AQ-4 & 54]; [LP-AQ-C1]; [DEC-AQ-36 & 74]; [HD-AQ-4]; [SPP-AQ-1-6 & 13]

Standard condition language:

Implementation of CEC CPM approved fugitive dust control plan.

STAN-AQ-2: Prevention and Removal of Track-out

[LM-AQ-55]; [DEC-AQ-75]

Standard condition language:

Track-out removal from publicly paved roadways.

STAN-AQ-3: Heavy Equipment Maintenance

[LP-AQ-C2]

Standard condition language:

Proper maintenance of heavy equipment, etc.

STAN-AQ-4: Mitigation Measures

[LM-AQ-3]

Standard condition language:

General Construction Mitigation Measures (may apply to all of the above).

STANDARD AIR QUALITY COMMISSIONING CONDITIONS

Commissioning conditions deal with activities associated with commissioning the power facility. There has one standard commissioning condition.

STANDARD AIR QUALITY COMMISSIONING CONDITIONS
Table 5.2

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-AQ-5	Commission Plan for Turbines	Yes

STAN-AQ-5:

[LM-AQ-5]; [DEC-AQ-7]

Standard condition language:

Submission of plan to District Services Division and the CEC CPM prior to the first firing of the Gas Turbines. Plan must describe procedures to be followed during the commissioning of the turbines.

STANDARD AIR QUALITY OPERATIONAL CONDITIONS

Operational conditions involve a complex mixture of conditions serving five different purposes. These purposes are:

1. Ensuring Best Available Control Technology;
2. Setting emission limits for normal operations;
3. Setting emission limits during startup and shutdown of the plant;
4. Ensuring offset requirements are met; and,
5. Setting emission limits for certain toxics.

Many of these conditions vary with the particular Air Quality Management District (AQMD) involved and its own unique approach to air permitting.

STANDARD BEST AVAILABLE CONTROL TECHNOLOGY OPERATIONAL CONDITIONS

These conditions ensure that Best Available Control Technology (BACT) requirements are met. There is one standard BACT condition.

STANDARD AIR QUALITY OPERATIONAL CONDITIONS

Best Available Control Technology

Table 5-3

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-AQ-6	Recommended Equipment Practice & Procedures	Yes

STAN-AQ-6: Recommended Equipment Practice and Procedures

[HD-AQ-2]; [SPP-AQ-30]

Standard condition language:

All basic and control equipment is to be operated and maintained in accordance with the vendors' recommended practices and procedures.

STANDARD EMISSION LIMIT OPERATION CONDITIONS

These conditions ensure ordinary emission limits are met that air impact modeling depend upon. There are 25 standard emission limit conditions.

STANDARD AIR QUALITY OPERATIONAL CONDITIONS
Emission Limits (Hourly, Daily, Monthly, Annually)
Table 5-4

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-AQ-7	Emission Limit Accrual	Yes
STAN-AQ-8	Heat Input Rate Three Hour Period	Yes
STAN-AQ-9	Power Train Heat Input Rate One Calendar Day	Yes
STAN-AQ-10	Power Train Heat Input Rate Average Per Year	Yes
STAN-AQ-11	Auxiliary Boiler Heat Input Rate Three Hour Period	Yes
STAN-AQ-12	Auxiliary Boiler Heat Input Rate Average Per Year	Yes
STAN-AQ-13	Gas Turbine Heat Input Rate Per Calendar Day	Yes
STAN-AQ-14	HRSGs/Auxiliary Boiler Heat Input Rate Per Year	Yes
STAN-AQ-15	Annual Toxic Air Emissions	Yes
STAN-AQ-16	Two Year Tests on Exhaust Points	Yes
STAN-AQ-17	Maximum Emissions Per Calendar Year	Yes
STAN-AQ-18	Annual Duties of Operator (Gas Turbine/Horse's)	Yes
STAN-AQ-19	Annual Duties of Operator (Auxiliary Boilers)	Yes
STAN-AQ-20	Expiration of Unused Balance of Firing Hours	Yes
STAN-AQ-21	Firing of HRSG Duct Burners	Yes
STAN-AQ-22	Auxiliary Boilers – Sulfur Content	Yes

STAN-AQ-23	Auxiliary Boiler Requirements	Yes
STAN-AQ-24	Stack Height Requirements	Yes
STAN-AQ-25	Emission Requirements for Gas Turbines & HRSGs	Yes

STAN-AQ-7: Emission Limits

[LM-AQ-10]; [LP-AQ-14]

Standard condition language:

Accrual of emission limits within a consecutive twelve-month period.

STAN-AQ-8: Heat Input Rate – Three Hour Period

[LM-AQ-15]; [DEC-AQ-20]

Standard condition language:

The maximum combined heat input rate to each power train averaged over any rolling three-hour period.

STAN-AQ-9: Heat Input Average – One Calendar Day

[LM-AQ-16]; [DEC-AQ-21]

Standard condition language:

The maximum combined heat input rate to each power train averaged per any one-calendar day.

STAN-AQ-10: Maximum Heat Input – Average Per Year

[LM-AQ-17]; [DEC-AQ-22]

Standard condition language:

The maximum combined heat input rate to each power train averaged per year.

STAN-AQ-11: Heat Rate Input – Three Hour Period

[LM-AQ-26]; [DEC-AQ-32]; [DEC-AQ-33]

Standard condition language:

Maximum heat input rate to the auxiliary boiler averaged over any rolling three-hour period.

STAN-AQ-12: Maximum Cumulative Heat Input – Per Year

[LM-AQ-27]; [DEC-AQ-34]

Standard condition language:

Maximum cumulative heat input rate to the auxiliary boiler per year.

STAN-AQ-13: Maximum Heat Input – Per Calendar Day

[LM-AQ-30]; [DEC-AQ-46]

Standard condition language:

Maximum combined heat input rate to the gas turbines allowed per calendar day.

STAN-AQ-14: Maximum Heat Input – HRSG's and Auxiliary Boiler

[LM-AQ-31]; [DEC-AQ-39 & 47]

Standard condition language:

Maximum cumulative heat input rate to the gas turbines, HRSG's and auxiliary boiler allowed per year.

STAN-AQ-15: Annual Toxic Air Emissions

[LM-AQ-34]; [DEC-AQ-50]

Standard condition language:

Maximum projected annual toxic air contaminant emissions from the gas turbines, HRSG's and auxiliary boiler, combined, allowed per year.

STAN-AQ-16: Two-Year Test on Exhaust Points

[LM-AQ-42]; [DEC-AQ-59]

Standard condition language:

Operator must conduct (within 60 days of the start-up) and every two years thereafter, a source test on exhaust points while each gas turbine and associated HRSG are operating at maximum load to determine accuracy of the continuous emission monitors.

STAN-AQ-17: Maximum Emissions HRSG's & Auxiliary Boiler Per Calendar Year

[LM-AQ-32]; [DEC-AQ-16, 17 & 48]

Standard condition language:

Maximum combined emissions from the gas turbines, HRSG's and auxiliary boiler during startups and shutdowns allowed per calendar day.

STAN-AQ-18: Annual Duties of Operator – Start Up

[LM-AQ-39]; [LP-AQ-19]; [DEC-AQ-53 & 55]

Standard condition language:

Operator must conduct (within a certain number of days of the start-up) and on an annual basis thereafter, a source test on exhaust points while each gas turbine and associated HRSG are operating at maximum load to determine accuracy of the emission monitors.

STAN-AQ-19: Annual Duties of Operator – 60 Days of Start Up

[LM-AQ-40]; [DEC-AQ-57]

Standard condition language:

Operator must conduct (within 60 days of the start-up) and on an annual basis thereafter, a source test on exhaust points while the auxiliary boiler is operating at maximum allowable operating rates to determine accuracy of the emission monitors.

STAN-AQ-20: Unused Balance

[LM-AQ-8 and 9]; [DEC-AQ-10 through 14]

Standard condition language:

Expiration of unused balance of the number of firing hours without abatement. This applies to NO_x and CO.

STAN-AQ-21: HRSG Duct Burners

[LM-AQ-18]; [DEC-AQ-23]

Standard condition language:

The HRSG duct burners shall not be fired unless its associated gas turbine is in operation.

STAN-AQ-22: Sulfur Contents for Auxiliary Boiler

[LM-AQ-25]; [DEC-AQ-31]

Standard condition language:

Maximum sulfur contents of the auxiliary boiler (fired exclusively on natural gas).

STAN-AQ-23: Auxiliary Boiler Requirements during Start-Up or Shut Down

[LM-AQ-28 & 29]; [DEC-AQ-37]

Standard condition language:

Auxiliary boiler requirements except during start-up or shut down.

STAN-AQ-24: Stack Heat Requirements

[LM-AQ-46]; [DEC-AQ-63]; [HD-AQ-10]; [SPP-AQ-25]

Standard condition language:

Stack height requirements (vary by project).

STAN-AQ-25: Requirements for Gas Turbines and HRSG's

[LM-AQ-21]; [LM-AQ-12]; [DEC-AQ-27]

Standard condition language:

List of requirements for the gas turbines and HRSG's except during gas turbine start-up or shutdown.

STANDARD STARTUP OPERATIONAL CONDITIONS

These conditions reevaluate startup and shutdown of the plant, a period of time when emission rates are much higher.

STANDARD AIR QUALITY OPERATIONAL CONDITIONS

Start-Up Emission Limits

Table 5.5

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-AQ-26	Start-Up and Shutdown Emissions Source Testing	Yes
STAN-AQ-27	Start-Up and Shutdown Emissions	Yes

STAN-AQ-26: Startup/Shutdown Source Testing

[LM-AQ-13]; [DEC-AQ-18]; [SPP-AQ-38]; [LM-AQ-13]; [HD-AQ-21]

Standard condition language:

Conduction of a District and CEC approved source test to determine NO_x, CO and POC emissions during start-up and shutdown of the gas turbines.

STAN-AQ-27: Startup and Shutdowns Emissions

[LM-AQ-33]; [DEC-AQ-15, 38 & 49]

Standard condition language:

Maximum cumulative emissions from the gas turbines, HRSG's and auxiliary boiler, including during startups and shutdowns, allowed during any consecutive twelve-month period.

STANDARD OFFSET REQUIREMENTS OPERATIONAL CONDITIONS

Offset requirement conditions are conditions associated with ensuring that offset requirements are met.

STANDARD AIR QUALITY OPERATIONAL CONDITIONS

Offset Requirements

Table 5-6

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-AQ-28	Emission Reduction Credits	Yes

STAN-AQ-28: Emission Reduction

[LM-AQ-49 & 50]; [LP-AQ-18]; [DEC-AQ-66 & 67]; [HD-AQ-33 & 39]; [SPP-AQ-26 & 41]

Standard condition language:

Demonstration of valid emission reduction credits to the appropriate Air Quality Management District.

STANDARD TOXIC EMISSION LIMIT OPERATIONAL CONDITIONS

These conditions ensure that certain toxic materials are emitted subject to rates and conditions necessary to ensure safety and health of the public and environment.

STANDARD AIR QUALITY OPERATIONAL CONDITIONS

Toxics Emission Limits

Table 5-7

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-AQ-29	CO, NOx, Minimization Requirements	Yes
STAN-AQ-30	Emissions of CO and NOx for Gas Turbines, Auxiliary Boilers, and HRSGs	Yes
STAN-AQ-31	Installation and Operation of SCR Systems	Yes
STAN-AQ-32	NOx and CO Emission Limitations Compliance	Yes
STAN-AQ-33	Limits on Pollutant Emissions	Yes
STAN-AQ-34	Emissions Limits for Auxiliary Boilers	Yes

STAN-AQ-35	Emission Opacity	Yes
STAN-AQ-36	Public Nuisance (Emissions/Discharges)	Yes
STAN-AQ-37	Maximum Sulfur Contents of Natural Gas	Yes

STAN-AQ-29: CO, NOx Requirements

[LM-AQ-1]; [SPP-AQ-32]; [LP-AQ-11]; [DEC-AQ-1]

Standard condition language:

CO, NOx general minimization requirements.

STAN-AQ-30: Emissions of CO and NOx

[LM-AQ-2]; [LP-AQ-10]; [DEC-AQ-2]; [HD-AQ-30]

Standard condition language:

Minimization of emissions of CO and NOx for gas turbines, auxiliary boilers, and HRSG's.

STAN-AQ-31: Installation and Operation of SCR Systems

[LM-AQ-3]; [LP-AQ-39, 41 & 43]; [DEC-AQ-3] [HD-AQ-11]

Standard condition language:

Installation, adjustment and operation of the oxidation catalysts and SCR systems to minimize emissions from turbines and HRSG's.

STAN-AQ-32: Compliance with NOx and CO Emission Limitations

[LM-AQ-4]; [LP-AQ-11]; [DEC-AQ-4, 5 & 6] [HD-AQ-28 & 29]

Standard condition language:

Compliance with the NOx and CO emission limitations.

STAN-AQ-33: Limits on Pollutant Emissions

[LM-AQ-11]; [LP-AQ-13]

Standard condition language:

Limits regarding combined pollutant emissions from gas turbines and HRSG's resulting from the start-up and shutdown procedures.

STAN-AQ-34: Limitations for Auxiliary Boilers

[LM-AQ-12]

Standard condition language:

Limitations of the emissions from auxiliary boilers.

STAN-AQ-35: Emission Opacity

[LP-AQ-56 & 59]; [HD-AQ-9]; [SPP-AQ-8]

Standard condition language:

Maximum emission opacity.

STAN-AQ-36: Public Nuisance

[LP-AQ-1, 47 & 54]; [SPP-AQ-7 & 20]

Standard condition language:

Forbiddance of discharge from any source that could cause a public nuisance.

STAN-AQ-37: Sulfur Contents of Natural Gas

[LM-AQ-14]; [LP-AQ-7 & 21]; [HD-AQ-5]; [SPP-AQ-29]

Standard condition language:

Maximum sulfur contents of natural gas fired turbines and HRSG's.

STANDARD MONITORING AND REPORTING OPERATIONAL CONDITIONS

These conditions ensure that all monitoring and reporting requirements for air emissions are complied with.

STANDARD QUALITY OPERATIONAL CONDITIONS

Monitoring and Reporting Requirements

Table 5-8

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-AQ-38	Continuous Monitoring System	Yes
STAN-AQ-41	Ammonia Emission Source Testing	Yes
STAN-AQ-42	Submission of Reports as Required by District Rules	Yes
STAN-AQ-43	Record and Reports Retention	Yes
STAN-AQ-44	Acid Rain Program	Yes
STAN-AQ-45	Notification of Violations of Permit Conditions	Yes
STAN-AQ-46	Adequate Stack Sampling Ports	Yes

STAN-AQ-38: Continuous Monitoring System

[LM-AQ-6, 19, &35]; [DEC-AQ-9, 45 & 51]; [LP-AQ-5 & 34]; [HD-AQ-14 & 19]

Standard condition language:

Continuous emission monitors and recorders for firing hours, fuel flow rates, stack gas NOx and O₂ emission concentrations.

STAN-AQ-41: Ammonia Emission Source Testing

[LM-AQ-38]; [DEC-AQ-54 & 56]; [SPP-AQ-22]

Standard condition language:

Operator must conduct a District-approved source test on exhaust points to determine the corrected ammonia (NH₃) emission concentration.

STAN-AQ-42: Submission of Reports as Required by District Rules/Regulations

[LM-AQ-43]; [DEC-AQ-60]; [LP-AQ-32]; [SPP-AQ-40]

Standard condition language:

Submission of all reports (including monthly CEM reports, monitor breakdown reports and emission excess reports) as required by District Rules or Regulations.

STAN-AQ-43: Record and Reports Retention

[LM-AQ-44]; [LP-AQ-28, 29 & 61]; [DEC-AQ-61]; [SPP-AQ-39]

Standard condition language:

Maintenance of all records and reports for a minimum of 5 years.

STAN-AQ-44: Acid Rain Program

[LP-AQ-36]; [DEC-AQ-69]; [HD-AQ-8]; [SPP-AQ-20]

Standard condition language:

Federal Acid Rain Program compliance.

STAN-AQ-45: Violations of Permit Conditions

[LM-AQ-45]; [LP-AQ-31]; [DEC-AQ-62]; [SPP-AQ-15]

Standard condition language:

Requirements regarding the notification of any violation of the permit conditions.

STAN-AQ-46: Stack Sampling

[LM-AQ-47]; [LP-AQ-6]; [DEC-AQ-64]; [HD-AQ-22]

Standard condition language:

Provision of adequate stack sampling ports and platforms to enable source testing.

STAN-AQ-47: Federal Title Operating Permit

[LM-AQ-51]; [DEC-AQ-68]; [SPP-AQ-16]

Standard condition language:

Submittal of application to the District for a Federal (Title V) Operating Permit within 12 months of the date of issuance of the District's Permit to Operate.

CATEGORICAL AIR QUALITY CONDITIONS

There have been three categorical air quality conditions.

CAT-AQ-1: Installation and Maintenance of Cooling Tower Drift Eliminators

[LM-AQ-52]; [DEC-AQ-72]; [LP-AQ-48 & 50]; [HD-AQ-27]

Description of categorical condition:

Proper installation and maintenance of cooling towers to minimize drift losses.

Triggering circumstance:

Cooling towers used.

CAT-AQ-2: Cooling Tower PM₁₀ Emission Limits

[LP-AQ-51 & 52]

Description of categorical condition:

Daily emission rates for each cooling tower.

Triggering circumstance:
Cooling tower emission limits required to ensure health and safety of public.

CAT-AQ-3: Ammonia Injection Requirements

[LP-AQ-9]; [HD-AQ-12]; [SPP-AQ-37]; [LM-AQ-13]

Description of categorical condition:

Injection of ammonia when SCR system reaches [varies with project] degrees Fahrenheit.

Triggering circumstance:

Ammonia injection required under certain circumstances to ensure health and safety of public.

UNIQUE AIR QUALITY CONDITIONS

The following unique conditions result from the unique characteristics of air quality permitting and its dual jurisdiction under the California Energy Commission and the appropriate Air Quality Management District (AQMD). Different AQMD's use differing styles of permitting which results in many different conditions.

LM-UNI-AQ-1: Maximum Sulfur Content of Exclusive Fuel

[LM-AQ-5]

Description of unique condition:

Turbines and duct burners shall be exclusively fueled with pipeline quality natural gas with sulfur content not exceeding 0.2 grains per 100 dscf on a rolling twelve month average basis.

HD-UNI-AQ-2: Record Turbines and Duct Burner Fuel Use

[HD-AQ-7)

Description of unique condition:

Fuel use by this equipment (turbines/duct burners) shall be recorded and maintained on site for a minimum of five years and provided to MDAQMD personnel upon request.

LM-UNI-AQ-5: Particular Matter Air Monitoring Station Prior to Construction

[LM-AQ-58]

Description of unique condition:

Prior to start of construction, project owner shall purchase, install, operate and maintain a particulate matter air monitoring station.

SPP-UNI-AQ-6: Particular Matter Discharge Limitations

[SPP-AQ-9]

Description of unique condition:

The facility shall not discharge particulate matter in excess of 0.3 grains per cubic feet of gas.

SPP-UNI-AQ-7: Maximum Facility Discharge Rates

[SPP-AQ-10]

Description of unique condition:

The facility shall not discharge in any one hour, fumes in total quantities in excess of amounts as prescribed.

SPP-UNI-AQ-8: Sulfur Oxide Emission Discharge Limit

[SPP-AQ-11]

Description of unique condition:

The facility shall not discharge from any single source of emission, any sulfur oxides in excess of 0.2 percent by volume.

SPP-UNI-AQ-9: Shall Not Conceal Emissions

[SPP-AQ-12]

Description of unique condition:

Project owner shall not build, erect or use any article, machine, equipment or other connivance to conceal an emission, which would otherwise constitute a violation of the Health and Safety Code of the State of California or of these Rules and Regulations.

SPP-UNI-AQ-10: Report Intent to Shut Down or Re-Start to APCO

[SPP-AQ-14]

Description of unique condition:

Intent to shut down or re-start shall be reported to the Air Pollution Control Officer at least 24 hours prior.

SPP-UNI-AQ-11: Submission of Hot Spots Emission Inventory After One Year

[SPP-AQ-17]

Description of unique condition:

The project owner shall prepare and submit to the District a Toxic Hot Spots emission inventory by the first month of August following the first full calendar year of facility operational history.

SPP-UNI-AQ-12: Obtain PSD Permit Prior to Operation

[SPP-AQ-18]

Description of unique condition:

A PSD permit must be obtained from the USEPA before commencement of facility operations.

SPP-UNI-AQ-13: Filing RMP with Sutter County

[SPP-AQ-21]

Description of unique condition:

Project owner shall file an RMP with the Sutter County office in charge of the prevention of accidental releases prior to operation startup.

SPP-UNI-AQ-14: Obtain Written Permission Prior to Transferring ATC

[SPP-AQ-22]

Description of unique condition:

The Authority to Construct is not transferable without prior written permission.

SPP-UNI-AQ-15: District Personnel Allowed Access at All Reasonable Times

[SPP-AQ-23]

Description of unique condition:

District personnel shall be allowed access to the plant site and pertinent records at all reasonable times.

SPP-UNI-AQ-16: Copy of District Permits Maintained at Facility

[SPP-AQ-24]

Description of unique condition:

Project owner shall maintain a copy of all District permits at the facility.

SPP-UNI-AQ-17: ERC's in Anomer District Not To Be Used Until MOU With District

[SPP-AQ-27]

Description of unique condition:

Calpine has produced evidence indicating that it has an enforceable right to ERC's located in another District. These ERCs cannot be used until the District Board adopts an approving resolution and enters into an MOU with the other District.

SPP-UNI-AQ-18: Maximum Heat Rates

[SPP-AQ-31]

Description of unique condition:

Maximum heat input limits on internal and external combustion emissions units.

SPP-UNI-AQ-19: BACT Emissions

[SPP-AQ-33]

Description of unique condition:

BACT emission limits under all operating load rates except during CTG startups and shutdowns.

SPP-UNI-AQ-20: Source Testing for NO_x, CO, SO₂ and VOC

[SPP-AQ-35]

Description of unique condition:

Within 90 days after commercial operation start up, source testing shall be performed to determine mass emission rates and concentrations of NO_x, CO, SO₂ and VOC.

SPP-UNI-AQ-23: File Semi-Annual Air Quality Report

[SPP-AQ-42]

Description of unique condition:

The project owner must file a semi-annual air quality report with the CPM.

HD-UNI-AQ-24: Conduct Compliance/Certification Tests

[HD-AQ-15]

Description of unique condition:

The project owner shall conduct all required compliance/certification tests in accordance with a District approved test plan.

HD-UNI-AQ-26: Maximum Concentration Limits

[HD-AQ-18]

Description of unique condition:

Project Owner shall, at least as often as once every five (5) years, include the following supplemental source tests in the annual compliance testing [Startup/Shut VOC Emissions]

HD-UNI-AQ-27: Initial Additional Source Testing

[HQ-23]

Description of unique condition:

An initial compliance test must be completed a minimum of 60 days and a maximum of 180 after initial start up to demonstrate 100% load with emission limits

HD-UNI-AQ-28: Initial commissioning Period of 120 Days

[HD-AQ-21]

Description of unique condition:

NO_x, CO, VOC and Ammonia concentration Limits shall not apply to this equipment during an initial commissioning period of no more than 120 days, commencing with the first firing of fuel in this equipment.

MVPC'S AIR QUALITY ANALYSIS

INTRODUCTION

This analysis evaluates the expected air quality impacts of the emissions of criteria air pollutants due to the construction and operation of the proposed Mountainview Power Plant (MVPP). Criteria air pollutants are defined as those for which a state or federal ambient air quality standard has been established to protect public health. They include nitrogen dioxide (NO₂), sulfur dioxide (SO₂), carbon monoxide (CO), ozone (O₃), volatile organic compounds (VOC), particulate matter less than 10 microns in diameter (PM₁₀) and hydrogen sulfide (H₂S).

In carrying out this analysis, the California Energy Commission staff evaluated the following major points:

- whether the MVPP is likely to conform with applicable Federal, State and the South Coast Air Quality Management District air quality laws, ordinances, regulations and standards, as required by Title 20, California Code of Regulations, section 1744(b);
- whether the MVPP is likely to cause significant air quality impacts, including new violations of ambient air quality standards or contributions to existing violations of those standards, as required by Title 20, California Code of Regulations, section 1742(b); and
- whether the mitigation proposed for the MVPP is adequate to lessen the potential impacts to a level of insignificance, as required by Title 20, California Code of Regulations, section 1742(b).

To these ends, MVPP will demonstrate compliance with the following LORS applicable to this issue.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Federal

The federal EPA implements and enforces the requirements of many of the federal environmental laws. EPA Region IX, which has its offices in San Francisco, administers EPA programs in California.

The federal Clean Air Act, as most recently amended in 1990, provides EPA with the legal authority to regulate air pollution from stationary sources such as MVPC. EPA has promulgated the following stationary source regulatory programs to implement the requirements of the Clean Air Act:

- Standards of Performance for New Stationary Sources (NSPS)
- National Emission Standards for Hazardous Air Pollutants (NESHAP)
- Prevention of Significant Deterioration (PSD)
- New Source Review (NSR)
- Title IV: Acid Deposition Control
- Title V: Operating Permits

National Standards of Performance for New Stationary Sources

Authority: Clean Air Act § 111, 42 USC § 7411; 40 CFR Part 60, Subparts Db and GG

Purpose: Establishes standards of performance to limit the emission of criteria pollutants (air pollutants for which EPA has established national ambient air quality standards (NAAQS)) from new or modified facilities in specific source categories. The applicability of these regulations depends on the equipment size; process rate; and/or the date of construction, modification, or reconstruction of the affected facility. The Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (Subpart Db) are applicable to the heat recover steam generators (HRSG). Because the HRSGs are equipped with duct burners that are fired by natural gas exclusively, only the NO_x limits of this regulation are applicable to MVPC. The Standards of Performance for Stationary Gas Turbines (Subpart GG)-which limit NO_x and SO₂ emissions from subject equipment-are applicable to the gas turbines. These standards are implemented at the local level with federal oversight.

Administering Agency: SCAQMD, with EPA Region IX oversight.

National Emission Standards for Hazardous Air Pollutants

Authority: Clean Air Act § 112, 42 USC § 7412; 40 CFR Part 63

Purpose: Establishes national emission standards to limit hazardous air pollutant (or HAP, which are air pollutants identified by EPA as causing or contributing to the adverse health effects of air pollution but for which NAAQS have not been established) emissions

from existing major sources of HAP emissions in specific source categories. The NESHAPs program also requires the application of maximum achievable control technology (MACT) to any new or reconstructed major source of HAP emissions to minimize those emissions. EPA is in the process of developing a NESHAP for gas turbines. The proposed NESHAP for gas turbines is expected to be completed by October 2000. While there is some uncertainty as to whether the gas turbine NESHAP will be applicable to the MVPC project due to the exemption from MACT standards for electric utility steam generating units, an analysis of the impacts of this regulation on the MVPC project is included for purposes of diligence.

Administering Agency: SCAQMD, with EPA Region IX oversight.

Prevention of Significant Deterioration Program

Authority: Clean Air Act §§ 160-169A, 42 USC §§ 7470-7491; 40 CFR Parts 51 and 52

Purpose: Requires preconstruction review and permitting of new or modified major stationary sources of air pollution to prevent significant deterioration of ambient air quality. PSD applies only to pollutants for which ambient concentrations do not exceed the corresponding NAAQS (i.e., attainment pollutants). The PSD program allows new sources of air pollution to be constructed, or existing sources to be modified, while preserving the existing ambient air quality levels, protecting public health and welfare, and protecting Class I areas (e.g., national parks and wilderness areas). These requirements are implemented at the local level with federal oversight.

Administering Agency: SCAQMD, with EPA Region IX oversight.

New Source Review

Authority: Clean Air Act §§ 171-193, 42 USC § 7501 et seq.; 40 CFR Parts 51 and 52

Purpose: Requires preconstruction review and permitting of new or modified major stationary sources of air pollution to allow industrial growth without interfering with the attainment of ambient quality standards. NSR applies to pollutants for which ambient concentrations exceed the corresponding NAAQS (i.e., nonattainment pollutants). These requirements are implemented at the local level with federal oversight.

Administering Agency: SCAQMD, with EPA Region IX oversight.

Title IV - Acid Rain Program

Authority: Clean Air Act § 401, 42 USC § 7651 et seq.; 40 CFR Part 72

Purpose: Requires the monitoring and reduction of emissions of acidic compounds and their precursors. The principal source of these compounds is the combustion of fossil fuels. Therefore, Title IV established national standards to limit SO_x and NO_x emissions from electrical power generating facilities. These standards are implemented at the local level with federal oversight.

Administering Agency: SCAQMD, with EPA Region IX oversight.

Title V - Operating Permits Program

Authority: Clean Air Act § 501 (Title V), 42 USC § 7661; 40 CFR Part 70

Purpose: Requires the issuance of operating permits that identify all applicable federal performance, operating, monitoring, recordkeeping, and reporting requirements. Title V applies to major facilities, acid rain facilities, subject solid waste incinerator facilities,

and any facility listed by EPA as requiring a Title V permit. These requirements are implemented at the local level with federal oversight.

Administering Agency: SCAQMD, with EPA Region IX oversight.

CAM Rule

Authority: Clean Air Act § 501 (Title V), 42 USC § 7414; 40 CFR Part 64

Purpose: Requires facilities to monitor the operation and maintenance of emissions control systems and report any control system malfunctions to the appropriate regulatory agency. If an emissions control system is not working properly, the Compliance Assurance Monitoring (CAM) rule also requires a facility to take action to correct the control system malfunction. The CAM rule applies to emissions units with uncontrolled potential to emit levels greater than applicable major source thresholds. However, emission control systems governed by Title V operating permits requiring continuous compliance determination methods are exempt from the CAM rule. Since the MVPC project will be issued a Title V permit requiring the installation and operation of continuous emissions monitoring systems, the MVPC project may qualify for this exemption from the requirements of the CAM rule. However, there is some uncertainty as to whether this exemption from the CAM rule applies to existing or future Title V facilities. Consequently, for purposes of diligence, an analysis of the impacts of this regulation on the MVPC plant is included.

Administering Agency: SCAQMD, with EPA Region IX oversight.

TRI Program

Authority: Emergency Planning and Community Right-to-Know Act § 313

Purpose: Under the Emergency Planning and Community Right-to-Know Act (EPCRA), certain facilities and establishments must report toxic releases to the environment if they:
Manufacture more than 25,000 pounds of a listed chemical per year;
Process more than 25,000 pounds of a listed chemical per year; or
Otherwise use more than 10,000 pounds of a listed chemical per year.

This program is commonly referred to as the Toxic Chemical Release Inventory (TRI). As applied to electric utilities, only those facilities in Standard Industrial Classification (SIC) Codes 4911, 4931, and 4939 that combust coal and/or oil for the purpose of generating electricity for distribution in commerce must report under this regulation. MVPC falls under SIC Code 4911, which covers establishments engaged in the generation, transmission, and/or distribution of electric energy for sale. However, the MVPC plant will not combust coal and/or oil for the purpose of generating electricity for distribution in commerce. Accordingly, this program does not apply to MVPC.

Therefore, the TRI program will not be addressed further.

Administering Agency: EPA Region IX

State

The California Air Resources Board (ARB) was created in 1968 by the Mulford-Carrell Air Resources Act, through the merger of two other state agencies. ARB's primary responsibilities are to develop, adopt, implement, and enforce the state's motor vehicle pollution control program; to administer and coordinate the state's air pollution research

program; to adopt and update, as necessary, the state's ambient air quality standards (AAQS); to review the operations of the local air pollution control districts (APCDs); and to review and coordinate preparation of the State Implementation Plan (SIP) for achievement of the federal AAQS.

State Implementation Plan

Authority: Health & Safety Code (H&SC) § 39500 et seq.

Purpose: Required by the federal Clean Air Act, the SIP must demonstrate the means by which all areas of the state will attain NAAQS within the federally mandated deadlines. ARB reviews and coordinates preparation of the SIP. Local APCDs must adopt new rules (and/or revise existing rules) and demonstrate that the resulting emission reductions, in conjunction with reductions in mobile source emissions, will result in the attainment of NAAQS. The relevant SCAQMD Rules and Regulations that have also been incorporated into the SIP are discussed with the local LORS.

Administering Agency: SCAQMD, with ARB and EPA Region IX oversight.

California Clean Air Act

Authority: H&SC §§ 40910 - 40930

Purpose: Established in 1989, the California Clean Air Act requires local APCIDs to attain and maintain both national and state AAQS at the "easiest practicable date." Local APCIDs must prepare air quality plans demonstrating the means by which AAQS will be attained. The SCAQMD Air Quality Plan is discussed with the local LORS.

Administering Agency: SCAQMD, with ARB oversight.

Toxic Air Contaminant Program

Authority: H&SC §§ 39650 - 39675

Purpose: Established in 1983, the Toxic Air Contaminant Identification and Control Act creates a two-step process to identify toxic air contaminants (TACs) and control their emissions. ARB identifies and prioritizes the pollutants to be considered for identification as TACs. ARB assesses the potential for human exposure to a substance while the Office of Environmental Health Hazard Assessment evaluates the corresponding health effects. Both agencies collaborate in the preparation of a risk assessment report that concludes whether a substance poses a significant health risk and should be identified as a TAC. In 1993, the Legislature amended the program to identify the 189 federal hazardous air pollutants as TACs. ARB reviews the emission sources of an identified TAC and develops, if necessary, air toxics control measures (ATCMs) to reduce the emissions. This program is implemented at the local level with state oversight.

Administering Agency: SCAQMD, with ARB oversight.

Air Toxic "Hot Spots" Act

Authority: H&SC §§ 44300-44384; 17 CCR §§ 93300-93347

Purpose: Established in 1987, the Air Toxics "Hot Spots" Information and Assessment Act supplements the TAC program, by requiring the development of a statewide inventory of TAC emissions from stationary sources. The program requires affected facilities to prepare (1) an emissions inventory plan that identifies relevant TACs and

sources of TAC emissions; (2) an emissions inventory report quantifying TAC emissions; and (3) a health risk assessment, if necessary, to characterize the health risks to the exposed public. Facilities whose TAC emissions are deemed to pose a significant health risk must issue notices to the exposed population. In 1992, the Legislature amended the program to further require facilities whose TAC emissions are deemed to pose a significant health risk to implement risk management plans to reduce the associated health risks. This program is implemented at the local level with state oversight.
Administering Agency: SCAQMD, with ARB oversight.

CEC and ARB Memorandum of Understanding

Authority: CA Pub. Res. Code § 25523(a); 20 CCR §§ 1752, 1752.5, 2300-2309, and Div. 2, Chap. 5, Art. 1, Appendix B, Part (k)
Purpose: Establishes requirements in the CEC's decision-making process on an application for certification that assures protection of environmental quality.
Administering Agency: California Energy Commission.

Public Nuisance

Authority: H&SC § 41700
Purpose: Prohibits the discharge from a facility of air pollutants that cause injury, detriment, nuisance, or annoyance to the public, or which endanger the comfort, repose, health, or safety of the public, or that damage business or property.
Administering Agency: SCAQMD, with ARB oversight.

Local

South Coast Air Quality Management District Air Quality Plan

Authority: H&SC § 40914
Purpose: The SCAQMD plan defines the proposed strategies, including stationary source control measure and new source review rules, whose implementation will attain the state AAQS. The air quality plans also demonstrate a five percent annual reduction in emissions of nonattainment pollutants in the SCAQMD. The relevant stationary source control measures and new source review requirements are discussed with SCAQMD Rules and Regulations.
Administering Agency: SCAQMD, with ARB oversight.

SCAQMD Rule 201 – Permit to Construct

Authority: H&SC § 40000 et seq., H&SC § 40400 et seq.
Purpose and Requirements: Rule 201 (Permit to Construct) establishes an orderly procedure for the review of new and modified sources of air pollution through the issuance of permits. Rule 201 specifies that any facility installing nonexempt equipment that causes or controls the emission of air pollutants must first obtain a Permit to Construction from the SCAQMD.
Administering Agency: SCAQMD with EPA Region IX and ARB oversight.

SCAQMD Preconstruction Review for Criteria Pollutants

Authority: H&SC § 40000 et seq., H&SC § 40400 et seq.

SCAQMD has three separate pre-construction review programs for new or modified sources of criteria pollutant emissions:

- Regulation XIII (New Source Review) combines the federal and state NSR requirements into a single rule. Regulation XIII establishes pre-construction requirements for new or modified facilities to ensure that operation of such facilities does not interfere with progress towards the attainment of AAQS without unnecessarily restricting economic growth. For RECLAIM facilities, this rule only applies to those nonattainment pollutants, or their precursors, not regulated under the RECLAIM program. Since the MVPC plant is an existing RECLAIM facility for NO_x, nonattainment pollutant provisions for NO_x are addressed under Rule 2005, and not under Regulation XIII.
- Regulation XVII (Prevention of Significant Deterioration) implements the PSD requirements of the federal Clean Air Act for attainment pollutants (i.e., NO₂ and SO₂). Regulation XVII establishes pre-construction review requirements for new or modified facilities to ensure that operation of such facilities does not significantly deteriorate air quality in attainment areas while maintaining a margin for future growth. The PSD requirements apply on a pollutant-specific basis to any project that is a new major stationary source or a major modification to an existing major stationary source. SCAQMD classified fossil fuel-fired steam electric plants with heat input ratings exceeding 250 MMBtu/hr that emit or have the potential to emit 25 tons per year (tpy) or more of NO_x or SO_x as major stationary sources. NO_x or SO_x emissions, from a modified major source, are subject to PSD if the cumulative emission increases for each pollutant that exceeds 25 tpy. Since the existing MVPC plant is an existing major source, and the net emissions increase associated with the installation of the new equipment is below 25 tpy for SO_x, the MVPC project will not trigger the PSD requirements for this pollutant. While the SCAQMD recently revised Regulation XVII, because the EPA has not yet redelegated the PSD program to the District based on the revised rule, the older version of Regulation XVII is used in this document.
- Rule 2005 (New Source Review for RECLAIM) integrates the new source review requirements of the federal and California Clean Air Acts with the SCAQMD's RECLAIM program. Rule 2005 establishes preconstruction requirements for new or modified RECLAIM facilities to ensure that operation of such facilities does not interfere with progress towards the attainment of AAQS without unnecessarily restricting economic growth. RECLAIM is a market incentive program designed to allow facilities flexibility in achieving emission reduction requirements for NO_x and SO_x using methods that include add-on emission controls, equipment modifications, reformulated products, operational changes, shutdowns, and the purchase of excess emission reductions. Since the existing MVPC plant is a NO_x RECLAIM facility, the MVPC project will be subject to the NO_x new source review requirements of Rule 2005. The existing facility and proposed addition of new equipment to the facility will not be subject to the SO_x new source review requirements of Rule 2005 because the RECLAIM program

does not include SO_x emissions from natural gas combustion equipment for applicability purposes.

A facility can be subject to more than one of these preconstruction review programs depending on the type of criteria pollutants, and criteria pollutant precursors, they will emit. The relevant criteria pollutants and precursors are summarized in Table 6.8-10. A criteria pollutant (e.g., NO_x) can be subject to both nonattainment (i.e., new source review) and attainment (i.e., PSD) preconstruction review programs if it is an attainment pollutant while another secondary pollutant (e.g., ozone for NO_x is a nonattainment pollutant). A new or modified facility can be subject to the elements of all three programs.

Preconstruction Air Quality Monitoring

The SCAQMD may, at their discretion, require preconstruction ambient air quality monitoring. Preconstruction monitoring data must be gathered over a one-year period to characterize local ambient air quality. SCAQMD may approve a shorter monitoring period of maximum anticipated ambient concentration.

Best Available Control Technology (BACT)

BACT must be applied to any new or modified source resulting in an increase in criteria pollutant, ozone depleting compound, and ammonia emissions. The SCAQMD defines BACT as the following unless the limitations are demonstrated to be unachievable:

- Most stringent emission limitation achieved in practice by a control device or technique for that category or class of source;
- Any control device or technique determined to be technologically feasible and cost-effective; or
- Most stringent emission limitation on a comparable emission source contained in any approved SIP (i.e., cannot be less stringent than the emission control required by any applicable federal, state, or District laws, rules, or regulations).

Emission Offsets

For a new or modified facility located in SCAQMD Zone 2A (as is MVPC), sufficient emission reduction credits (ERCs) must be provided to offset the increase in CO, PM₁₀, SO_x, and VOC emissions at a 1.2:1 offset ratio.

For a new or modified facility located in SCAQMD Zone 2 (as is MVPC), sufficient RECLAIM Trading Credits (RTCs) must be provided to offset the annual increase in NO_x emissions for the first year of operation at a 1:1 offset ratio.

Air Quality Impact Analysis

An air quality dispersion analysis must be conducted, using a mass emissions-based screening analysis contained in the rule or an approved dispersion model, to evaluate impacts of increased criteria pollutant emissions from any new or modified facility on ambient air quality. MVPC project emissions must not cause a significant increase in ambient nonattainment pollutant concentrations as shown in Table 6.8-12

An air quality dispersion analysis must also be conducted, using an approved dispersion model, to evaluate impacts on ambient air quality of significant PSD increases of NO_x and SO_x, emissions from any new or modified or stationary source. MVPC project emissions must not cause an exceedance of any AAQS and the increase in ambient air concentrations must not exceed the allowable increments.

Protection of Class I Areas

A modeling analysis must be conducted to assess the impacts of project emissions on visibility in nearby Class I areas if the increase in NO_x and PM₁₀ emissions exceed 25 tpy or 15 tpy, respectively. The increase in ambient air quality concentrations for the PSD attainment pollutants (i.e., NO_x and SO_x) within the nearest Class I area must also be characterized if there is a significant emission increase associated with the new or modified major source.

Visibility, Soils, and Vegetation Impacts

Impairment to visibility, soils, and vegetation resulting from NO_x or SO_x, emissions as well as associated commercial, residential, industrial, and other growth must be analyzed. Cumulative impacts to local ambient air quality must also be analyzed.

Administering Agency: SCAQMD with EPA Region IX and ARB oversight.

SCAQMD Rule 1401 - New Source Review of Toxic Air Contaminants

Authority: H&SC § 40000 et seq., H&SC § 40400 et seq.

Purpose and Requirements: Rule 1401 (New Source Review of Toxic Air Contaminants) establishes allowable risks for new or modified sources of TAC emissions. Rule 1401 specifies limits for maximum individual cancer risk (MICR), cancer burden, and noncarcinogenic acute and chronic hazard indices (HIs) for new or modified sources of TAC emissions. While Rule 1401 does not specifically require the application of best available control technology for toxics (T-BACT) to any new or modified source emitting carcinogenic TACs, the rule relaxes the MICR risk threshold when T-BACT is applied. The health risks resulting from project emissions (as well as any other facility sources (i.e., owned and operated by the applicant) located within 100 meters of a project emission source), as demonstrated with a risk assessment, must not exceed the risk thresholds shown in Table 6.8-14.

Administering Agency: SCAQMD.

SCAQMD Regulation XXX - Federal Operating Permit

Authority: H&SC § 40000 et seq., H&SC § 40400 et seq.

Purpose and Requirements: Regulation XXX (Title V Permits) provides for the issuance of federal operating permits that contain all federally enforceable requirements for stationary sources as mandated by Title V of the Clean Air Act. Regulation XXX requires major facilities and acid rain facilities undergoing modifications to obtain an operating permit containing the federally enforceable requirements mandated by Title V of the Clean Air Act. A facility shall not construct, modify, or operate equipment at a Title V facility without first obtaining a permit revision that allows such construction, modification, or operation. An application must be submitted to the District that presents

all information necessary to evaluate the subject facility and determine the applicability of all regulatory requirements.

Administering Agency: SCAQMD with EPA Region IX oversight.

SCAQMD Regulation XXXI - Acid Rain Permit

Authority: H&SC § 40000 et seq., H&SC § 40400 et seq.

Purpose and Requirements: Regulation XXXI (Acid Rain Permit Program) provides for the issuance of acid rain permits in accordance with Title IV of the Clean Air Act. Regulation XXXI requires a subject facility to hold emissions allowances for SO_x, and to monitor SO_x, NO_x, and CO₂ emissions and exhaust gas flow rates (monitoring of operating parameters such as fuel use and fuel constituents is an allowable alternative to exhaust CEM systems). An acid rain facility, such as MVPC, must also obtain an acid rain permit as mandated by Title IV of the Clean Air Act. A permit application must be submitted to the SCAQMD at least 24 months before operation of the new units commence. The application must present all relevant sources at the facility, a compliance plan for each unit, applicable standards, and estimated commencement date of operation.

Administering Agency: SCAQMD with EPA Region IX oversight.

SCAQMD Regulation IX- Standards of Performance for New Stationary Sources

Authority: H&SC § 40000 et seq., H&SC § 40400 et seq.

Purpose and Requirements: Regulation IX (Standards of Performance for New Stationary Sources) incorporates, by reference, the provisions of Part 60, Chapter 1, Title 40 of the Code of Federal Regulations. Regulation IX requires compliance with federal Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units and Stationary Gas Turbines.

Subpart Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units) applies to steam generating units with a heat input at peak load greater than 100 MMBtu/hr at the higher heating value. For subject equipment fired exclusively on natural gas, the NSPS limits only the NO_x emissions for the unit. The NO_x emission limit for natural gas-fired HRGSs is 0.20 lbs./MMBtu.

Subpart GG (Standards of Performance for Stationary Gas Turbines) applies to gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules; per hour (Gj/hr), or 10.15 MMBtu/hr, at the higher heating value. The NSPS limits the sulfur content of fuel to 0.8 percent. The NSPS also limits NO_x emissions as determined by the following equation:

Administering Agency: SCAQMD with EPA Region IX oversight.

SCAQMD Prohibitory Rules

Authority: H&SC § 40000 et seq., H&SC § 40400 et seq., indicated SCAQMD Rules

Purpose and Requirements: Relevant local prohibitory rules of the SCAQMD include the following:

- Rule 401 - Visible Emissions: Establishes limits for visible emissions from stationary sources. Rule 401 prohibits visible emissions as dark or darker than Ringelmann No. 1 for periods greater than three minutes in any hour.

- Rule 402 - Nuisance: Prohibits the discharge from a facility of air pollutants that cause injury, detriment, nuisance, or annoyance to the public, or that damage business or property.
- Rule 403 - Fugitive Dust: Establishes requirements to reduce the amount of PM entrained in the ambient air as a result of man-made fugitive dust sources. Rule 403 requires the implementation of best available control measures to minimize fugitive dust emissions and prohibits visible dust emissions beyond the property line, a 50 I.Lg/M3 incremental increase in PM₁₀ concentrations across a facility (as measured by upwind and downwind concentrations), and track-out of bulk material onto public, paved roadways.
- Rule 407 - Liquid and Gaseous Air Contaminants: Establishes limits for CO and SO_x, emissions from stationary sources. Rule 407 prohibits CO and SO_x, emissions in excess of 2,000 ppm and 500 ppm, respectively, from any source. Stationary internal combustion reciprocating engines are exempt from this rule. In addition, equipment that complies with the requirements of Rule 431.1 is exempt from the SO_x limit. Since the facility will comply with Rule 431.1, the SO_x, provisions of Rule 407 will not be addressed further.
- Rule 409 - Combustion Contaminants: Establishes limits for particulate emissions from fuel combustion sources. Rule 409 prohibits particulate emissions in excess of 0.1 grains per cubic foot of gas at 12 percent CO₂ at standard conditions. The provisions of this rule do not apply to stationary internal combustion reciprocating engines.
- Rule 431.1 - Sulfur Content of Gaseous Fuels: Establishes limits for the sulfur content of gaseous fuels to reduce SO_x, emissions from stationary combustion sources. Rule 431.1 limits the sulfur content of natural gas to 16 ppmv.
- Rule 431.2 - Sulfur Content of Liquid Fuels: Establishes limits for the sulfur content of liquid fuels to reduce SO_x emissions from stationary combustion sources. Rule 431.2 limits the sulfur content of diesel fuel to 0.05 percent by weight.
- Rule 474 - Fuel Burning Equipment - Oxides of Nitrogen: Establishes limits for emissions of NO_x from stationary combustion sources. However, NO_x RECLAIM facilities are exempt from the provisions of Rule 474. Since MVPC is also a NO_x RECLAIM facility, Rule 474 is not applicable to the MVPC project and will not be addressed further.
- Rule 475 - Electric Power Generating Equipment: Establishes limits for combustion contaminant (i.e., PM) emissions from subject equipment. Rule 475 prohibits PM emissions in excess of 11 lbs./hr (per emission unit) and 0.01 grains per dry standard cubic foot (gr/dscf) @ 3 percent O₂. These provisions do not apply to replacement equipment if such equipment reduces NO_x emissions by at least 50 percent provided that PM emissions do not exceed 0.05 gr/scf.
- Rule 476 - Steam Generating Equipment: Establishes limits for emissions of NO_x and combustion contaminants (i.e., PM) from subject equipment. However, NO_x RECLAIM facilities are exempt from the NO_x provisions of Rule 476. Furthermore, those of Rule 475 supercede the PM provisions of Rule 476. Therefore, Rule 476 is not applicable to the MVPC and will not be addressed further.
- Rule 53A - Specific Contaminants: Establishes limits for emissions of sulfur compounds (i.e., SO_x) and combustion contaminants (i.e., PM) from stationary

sources. Rule 53A prohibits SO_x and PM emissions in excess of 500 ppm and 0.1 gr/dscf @ 12 percent 2, respectively.

- Rule 1110.2 - Emissions from Stationary Internal Combustion Engines: Establishes limits for emissions of NO_x, VOC, and CO from the stationary internal combustion reciprocating engines. However, emergency standby engines that operate less than 200 hours per year are exempt from this regulation. Since the emergency generator and fire pump engines will each be limited to operating less than 200 hours per year, they are exempt from this regulation. Therefore, Rule 1110.2 is not applicable to MVPC and will not be addressed further.
- Rule 1134 - Emissions of Oxides of Nitrogen from Stationary Gas Turbines: Establishes limits for emissions of NO_x from the stationary gas turbines. However, NO_x RECLAIM facilities are exempt from the provisions of Rule 1134. Therefore, Rule 1134 is not applicable to MVPC and will not be addressed further.
- Rule 1135 - Emissions of Oxides of Nitrogen from Electric Power Generating Systems: Establishes limits for emissions of NO_x from the electricity generating systems. However, NO_x RECLAIM facilities are exempt from the provisions of Rule 1135. Therefore, Rule 1135 is not applicable to MVPC and will not be addressed further.
- Rule 1146 - Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters: Establishes limits for emissions of NO_x and CO from industrial, institutional, and commercial steam generating units. However, boilers used to generate electricity are exempt from the regulation. Therefore, Rule 1146 is not applicable to MVPC and will not be addressed further.
- Rule 1404 - Hexavalent Chromium Emissions from Cooling Towers: Prohibits the addition of hexavalent chromium-containing water treatment chemicals to cooling tower circulating water.

Administering Agency: SCAQMD with EPA Region IX and ARB oversight.

SETTING

The proposed facility will be located on an existing facility currently being annexed by the City of Redlands in San Bernardino County. The project site consists of a total of 64 acres located adjacent to the Santa Ana River. The existing facility consists of two steam boiler generating units that feed into an immediately adjacent Southern California Edison (SCE) transmission facility and substation. The two existing units utilize groundwater in cooling towers for cooling purposes and provide a nominal gross output of 66 MW each. The proposed new facility will utilize 18.7 already hard-packed or paved acres of the site, mostly to the North of the existing facility.

The area can be best described as an industrial region with other industrial areas and a mixture of residential and commercial zones nearby. To the North of the site lies the Santa Ana River, dry most of the year, which has numerous other industrial and commercial facilities along its side. Directly across the Santa Ana River is the former Norton Air Force Base, now the San Bernardino International Airport. It primarily serves as a commercial airport with large cargo planes flying in and out on a regular basis. The

Santa Ana River itself has been highly disturbed, with reinforced or concrete channel banks, and numerous surface mining operations going on to the North within the river bed. To the East of the Site lie agricultural land and a water treatment facility. To the South lies agricultural land followed by the Highway-10 freeway. To the west lie commercial, light industrial and residential areas. The residential area is a small enclave to the Southwest of the facility.

No residential or industrial developments have been proposed within a 2-mile radius of the site. Several developers are considering commercial development for much of the remaining undeveloped land in the area. There are several schools and other potentially significant point sources of criteria and non-criteria pollutants in the area. Additionally, the project is in a non-attainment region for PM-10 and ozone [is this all] requiring offsetting of these to pollutants.

MVPC'S CONDITIONS ANALYSIS

MVPP is a natural gas combined cycle project very similar to previously permitted projects. Most conditions will be set by the SCAQMD through its determination of compliance (DOC). A preliminary determination of compliance is expected shortly (PDPC) and when issued, MVPC will submit an appropriate stipulation.

UNRESOLVED ISSUES IN AIR QUALITY

Pending the release of the PDOC, MVPC is unable to stipulate to appropriate conditions of certification. Upon release of the PDOC, MVPC will submit a stipulation as to Air Quality conditions. MVPC intends to stipulate to standard CEC conditions as well, such as the fugitive dust conditions.

PUBLIC HEALTH

This section presents a comprehensive analysis of Public Health issues, both in previously permitted projects and in the case of the Mountainview Power Plant (MVPP)⁴. Previously permitted projects are analyzed for their standard, categorical and unique conditions as well as what triggered each categorical and unique condition. Next, MVPP is juxtaposed with past projects allowing necessary conditions to be identified. The juxtaposition begins by a thorough review of applicable laws, ordinances, regulates and standards (LORS). Then, the setting of the MVPP in the context of public health is presented. Mountainview Power Company (MVPC) stipulates to conditions providing required mitigation and LORS compliance. The section closes by identifying any outstanding issues not resolved by the stipulated conditions.

OVERVIEW OF PUBLIC HEALTH ISSUE AREA

The issue area of Public Health involves assessing the potential public health impacts and LORS compliance issues associated with constructing and operating a power plant. There have been no standard or categorical conditions set forth in the previously permitted projects, only unique conditions.

PAST PUBLIC HEALTH CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
UNI-PUB-1	Emission Controlled by Natural Gas Dehydrators Unless Not Required Per Health Risk Assessment	No
UNI-PUB-2	Cooling Tower Drift Eliminators Effectiveness Ensurance	Yes
UNI-PUB-3	Soil Analysis For Health Risks From Imported Soil	No

UNIQUE PUBLIC HEALTH CONDITIONS

UNI-PUB-1: Emission Controlled Natural Gas Dehydrators Unless Not Required Per Health Risk Assessment
[SPP-PUB-1]

⁴ As in all the sections of this document, abbreviations are used for the last five permitted projects before the California Energy Commission. Those abbreviations are:
SPP = Sutter Power Plant
DEC = Delta Energy Center
LM = Los Medanos Energy Center
HD = High Desert
LP = La Paloma

Triggering Situation:

Project required a natural gas dehydrator. No health risk assessment had been conducted to eliminate the need for natural gas dehydrators that minimize emissions.

Description of Unique Condition:

Unless a screening health risk assessment performed by the project owner pursuant to CAPCOA Guidelines shows that health risks to the public are not significant, the project owner will require its contractor(s) to construct natural gas dehydrators using a design in which vent emissions form glycol regeneration tanks through packed-chilled condensers to minimize hazardous air emissions.

Protocol:

Condition has no protocol.

Verification:

Prior to construction of the dehydrators, the project owner will provide the CPM with copies of the Authority to Construct for the dehydrators from the Colusa County Air Pollution Control District.

UNI-PUB-2: Cooling Tower Drift Eliminators Effectiveness Ensurance

[DEC-PUB-1]

Triggering Situation:

Drift eliminators were necessary for LORS compliance with respect to both air quality and public health.

Description of Unique Condition:

The project owner shall perform a visual inspection of the cooling tower drift eliminators once per calendar year, and repair or replace any drift eliminator components which are broken or missing. Prior to initial operation of the project, the project owner shall have the cooling tower vendor's field representative inspect the cooling tower drift eliminator and certify that the installation was performed in a satisfactory manner. The CPM may, in years 5 and 15 of project operation, require the project owner to perform a source test of the PM10 emissions rate from the cooling tower to verify continued compliance with the vendor guaranteed drift rate.

Protocol:

Condition has no protocol.

Verification:

The project owner shall include the results of the annual inspection of the cooling tower drift eliminators and a description of any repairs performed in the next required compliance report. The initial compliance report will include a copy of the cooling tower vendor's field representative's inspection report of the drift eliminator installation. If the CPM requires a source test as specified in Public Health-1, the project owner shall submit to the CPM for approval a detailed source test procedure 60 days prior to the test. The project owner shall incorporate the CPM's comments, conduct testing, and submit test results to the CPM within 60 days following the tests.

UNI-PUB-3: Soil Analysis For Health Risks From Imported Soil

[LM-PUB-1]

Triggering Situation:

Project would be importing contaminated soil.

Description of Unique Condition:

Any soil that is to be imported shall be sampled and analyzed by the project owner for metals, total petroleum hydrocarbons (TPH) as motor oil, gasoline, and diesel, volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs) to document that the imported soil does not contain concentrations of these compounds in excess of health-based risk levels.

Protocol:

Condition has no protocol.

Verification:

The project owner shall maintain records documenting the sampling and analysis that has been performed pursuant to Condition Public Health-1 and shall make such records available to the Energy Commission Compliance Project Manager upon request.

PROPOSED UNIQUE PUBLIC HEALTH CONDITION

MVPP AIR-1 (proposed): Cooling Tower TCE Emission Limit

Project owner shall ensure that use of middle aquifer water is limited such that each cooling tower shall not emit more than 16 pounds of TCE per year.

Protocol:

Project owner shall perform (daily, weekly, monthly?) samples to verify TCE content of middle aquifer water. Project owner shall monitor and record total volume of middle aquifer pumped for the (week, month) following the TCE concentration test and use that number to calculate total TCE emissions. Project owner shall assume that all TCE inserted into the cooling tower system evaporates.

Verification:

In the annual compliance report, MVPP will report total TCE emissions for each cooling tower.

MVPC'S PUBLIC HEALTH ANALYSIS

INTRODUCTION

Operation of the proposed MVPP would create combustion products and possibly expose the general public and workers to these pollutants as well as the toxic chemicals associated with other aspects of facility operations. The purpose of this public health analysis is to determine whether a significant health risk would result from public exposure to these chemicals and combustion by-products routinely emitted during project operations. Most of the issues related to pollutant emissions are addressed in the Air Quality section of this document. The issue of possible worker exposure, however, is addressed in the Worker Safety and Fire Protection section of this document.

The primary concern addressed in this section is exposure to pollutants for which no air quality standards have been established. These are known as non-criteria pollutants, toxic

air pollutants, or air toxics. Those for which ambient air quality standards have been established are known as criteria pollutants. The criteria pollutants are also identified in this section (along with regulations for their control) because of their usually significant contribution to the total pollutant exposure in any given area. Furthermore, the same control technologies may be effective for controlling both types of pollutants when emitted from the same source. Compliance with the required control technologies is discussed in the Air Quality section.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Federal

- The Clean Air Act of 1970 (42 U.S.C., section 7401 et seq.) requires establishment of ambient air quality standards to protect the public from the effects of air pollutants. These standards have been established by the United States Environmental Protection Agency (EPA) for the major air pollutants: nitrogen dioxide, ozone, sulfur dioxide, carbon monoxide, sulfates, and particulate matter with a diameter of 10 micron or less (PM10), and lead.

State

- California Health and Safety Code section 25249.5 et seq. requires posting of facilities that have chemicals known to cause cancer and public notification of significant risks. The results of the HRA related to this project are well below levels that would require public notification.
- California Health and Safety Code section 39606 requires the California Air Resources Board (ARB) to establish California's ambient air quality standards to reflect the California-specific conditions that influence its air quality. Such standards have been established by the ARB for ozone, carbon monoxide, sulfur dioxide, PM10, lead, hydrogen sulfide, vinyl chloride and nitrogen dioxide. The same biological mechanisms underlie some of the health effects of most of these criteria pollutants as well as the non-criteria pollutants. The California standards are listed together with the corresponding federal standards in the Air Quality section of this document.
- California Health and Safety Code section 41700 states that "No person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause or have a natural tendency to cause injury or damage business or property."
- The California Health and Safety Code section 39650 et seq., mandates that the California Environmental Protection Agency (Cal-EPA) establish safe exposure limits for toxic, non-criteria air pollutants and identify the best available methods for their control. These laws also require that the new source review rules for each air district include regulations establishing procedures to control the emission of these pollutants.
- The toxic emissions from natural gas combustion are listed in ARB's April 11, 1996 California Toxic Emissions Factors (CATEF) database for natural gas-fired

combustion turbines. Cal-EPA has developed specific cancer potency estimates for assessing their related cancer risks at specific exposure levels. For non-cancer causing toxic air pollutants, Cal-EPA established specific no-effects levels (known as reference exposure levels or RELs) for assessing the likelihood of producing health effects at specific exposure levels. Such health effects would be considered significant only when exposure exceeds these reference levels. MVPC understand that Energy Commission staff uses these Cal-EPA potency estimates and reference exposure values in its health risk assessments.

- California Health and Safety Code section 44300 et seq. requires facilities, which emit large quantities of criteria pollutants and any amount of non-criteria pollutants to provide the local air district an inventory of toxic emissions. Such facilities may also be required to prepare a quantitative health risk assessment to address the potential health risks involved. The ARB and the South Coast Air Quality Management District will ensure implementation of these requirements for the proposed project.

Local

- SCAQMD Rule 402, prohibits the discharge of air contaminants that cause injury, detriment, nuisance or annoyance to the public, or that damages businesses or property.
- SCAQMD Rule 1401, establishes allowable risks for new or modified sources to TAC emissions.
- SCAQMD Rule 1404, prohibits the use of hexavalent chromium as a water treatment chemical in cooling towers.

SETTING

The proposed facility will be located on an existing facility currently being annexed by the City of Redlands in San Bernardino County. The project site consists of a total of 64 acres located adjacent to the Santa Ana River. The existing facility consists of two steam boiler generating units that feed into an immediately adjacent Southern California Edison (SCE) transmission facility and substation. The two existing units utilize groundwater in cooling towers for cooling purposes and provide a nominal gross output of 66 MW each. The proposed new facility will utilize 18.7 already hard-packed or paved acres of the site, mostly to the North of the existing facility.

The area can be best described as an industrial region with other industrial areas and a mixture of residential and commercial zones nearby. To the North of the site lies the Santa Ana River, dry most of the year, which has numerous other industrial and commercial facilities along its side. Directly across the Santa Ana River is the former Norton Air Force Base, now the San Bernardino International Airport. It primarily serves as a commercial airport with large cargo planes flying in and out on a regular basis. The Santa Ana River itself has been highly disturbed, with reinforced or concrete channel banks, and numerous surface mining operations going on to the North within the river bed. To the East of the site lies agricultural land and a water treatment facility. To the South lies agricultural land followed by the Highway-10 freeway. To the West lies commercial, light industrial and residential areas. The residential area is a small enclave to the Southwest of the facility.

No residential or industrial developments have been proposed within a 2-mile radius of the site. Several developers are considering commercial development for much of the remaining undeveloped land in the area. There are several schools and other potentially significant point sources of criteria and non-criteria pollutants in the area. Additionally, the project is designated in a non-attainment region for national and/or state ambient air quality standards for ozone, PM-10, and carbon monoxide, requiring the emissions of these pollutants and their precursors be offset in accordance with SCAQMD regulations.

Method of Analysis

Any significant pollution-related impacts from this project will mainly be associated emissions from its natural gas-fired combustion turbines. Potential public exposure in the surrounding area is estimated through air dispersion modeling. It is these exposure estimates, along with data characterizing the existing conditions that are used to establish whether total exposures will be above or below the applicable air quality standards or reference exposure levels established against non-cancer effects. For cancer-causing (or carcinogenic) effects, such assessment is made in terms of the potential for exposure at levels whose related cancer risks are considered significant by regulatory agencies. The procedure for evaluating the potential for these cancer and non-cancer health effects is known as a health risk assessment process and consists of the following steps:

- A hazard identification step in which each pollutant of concern is identified along with possible health effects;
- A dose-response assessment step in which the relation between the magnitude of exposure and the probability of effects is established;
- An exposure assessment step in which the possible extent of pollutant exposures from a project is established for all possible pathways by dispersion modeling; and,
- A risk characterization step in which the nature and the magnitude of the possible human health risk is assessed.

Health risks from a source of air pollutants can result from high-level exposure, which creates immediate-onset (acute) effects, or prolonged low-level exposure, which creates chronic effects. Non-cancer effects are assumed to result after exposure above specific thresholds.

Assessing the Likelihood of Non-Cancer Effects

The method used by regulatory agencies to assess the likelihood of acute or chronic pollutant impacts is the hazard index method. In this approach, a hazard index is calculated as a numerical representation of the likelihood of significant health impacts at the exposure levels expected for the source in question. This index is calculated by dividing the exposure estimate by the applicable reference exposure level or air quality standard. After calculating the hazard indices for the individual pollutants, these indices are added together for all those that affect the same part of the body or target organ, to obtain a total hazard index. Total hazard indices of 1.0 or less are regarded as indicative of a potential lack of significant effects. However, exposure yielding a total hazard index

of more than 1.0 may indicate a significant potential for the non-cancer effects being considered.

Assessing the Potential Risk of Cancer

According to present understanding, cancer from carcinogenic exposure results from biological effects at the molecular level. Such effects are currently assumed possible from every exposure to a carcinogen. Therefore, the likelihood of cancer is generally considered by regulatory agencies as more sensitive than the likelihood of non-cancer effects for assessing the environmental acceptability of a source of pollutants. This accounts for the prominence of theoretical cancer risk estimates in the environmental risk assessment process.

For any source of specific concern, the potential risk of cancer is obtained by multiplying the exposure estimate by the potency factors for the individual carcinogens involved. These potency factors are numerical values established to represent the cancer-causing potential of one carcinogen as compared to the others. After calculating these individual risk values, they are added together for the project's carcinogens to obtain the total incremental cancer risk associated with operations.

Given the conservatism in the various phases of this risk calculation process, these numerical estimates are regarded as only representing the upper bounds on the cancer risk at issue. The actual risk will likely be lower and could indeed be zero. The significance of these estimates as indicators of a real cancer hazard is assessed according to specific evaluative criteria.

Significant Criteria

Various state and federal agencies specify different cancer risk levels as levels of significance with regard to specific sources. For example, a risk of 10 in a million is considered under the Air Toxics "Hot Spots" (AB 2588) and the Proposition 65 programs as significant, and therefore, used as a threshold for public notification in cases of air toxics emissions from existing sources. The South Coast AQMD as well as other air pollution control agencies in California consider the same risk of 10 in a million as acceptable for a source, such as the MVPP, in which the best available control technology for air toxics (T-BACT) is used. Projects that result in a risk of less than 1 in a million are acceptable even if T-BACT is not used. MVPP believes the Energy Commission considers a potential cancer risk of one in a million as the *de minimis* level, which is the level below which the related exposure is negligible (meaning that project operation is not expected to result in any increase in cancer).

Above this level, further mitigation could be recommended after consideration of issues related to the limitations of the risk assessment process. For non-carcinogenic pollutants, MVPP believes significant health impacts to be unlikely when the hazard index estimate is 1.0 or less. If more than 1.0, MVPP would regard the related emissions as potentially significant from an environmental health perspective and would implement specific

mitigation measures after consideration of issues related to the uncertainties in the assessment process.

IMPACTS

The following referenced sections analyze and address the impacts relating to Public Health issues. Construction (AFC pp.6.8-55 to 6.8-65, Appendix G.2, and Attachment AQ-15-A to data response AQ-15); Operational impacts (AFC pp. 6.8-65 to 6.8-96, Appendices G.3 and G.5). Non-criteria pollutant impacts, referenced and discussed AFC at page 6.8-87 (criteria pollutant impacts from project operation), 6.9.13 (non-criteria pollutant impacts from project operation), and Attachment AQ-15A at pages 6.8-64 to 6.8-65 (construction impacts).

MITIGATION

Emissions of toxic pollutants to the air will be minimized through the use of natural gas as the only fuel used at the MVPP project site for the gas turbines and duct burners. The control technology installed to reduce the emissions of criteria pollutants, such as the oxidation catalyst, will also minimize emissions of organic HAP from the gas turbines. Emissions of ammonia from the stacks will be limited by minimizing the amount of ammonia slip to a maximum of 5ppm. In addition, risks associated with the storage and handling of the ammonia will be mitigated through the measures indicated in MVPC, 2000a, pp. 6.10-16 and 17.

Emissions of toxic metals and salts from the cooling towers will be minimized through the use of high efficiency drift eliminators and by setting a limit regarding the use of middle aquifer water with TCE in the cooling towers.

Since the results of the HRA indicate that project acute, chronic, and carcinogenic impacts are all well within acceptable levels, no additional mitigation measures are required.

Cumulative Impacts

Unlike criteria pollutant impacts, the impacts of toxic air pollutants are compared with significance criteria designed to ensure that a project results in neither a significant impact by itself, nor a significant cumulative impact. Consequently, no explicit cumulative impacts analysis is performed for non-criteria pollutants. The cumulative impacts of criteria pollutants are discussed further in the Air Quality section. These cumulative impacts result in mandated mitigation requirements that the project has satisfied.

FACILITY CLOSURE

Shut down of the facility will cease the emissions of Toxic Air Contaminants. Therefore, no significant public health impacts related to toxic air pollutants are expected due to abandonment or closure of the proposed project. This will apply to temporary facility closure as well.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion:

MVPC has determined that the construction and operation of the proposed natural gas-burning project will not pose a significant public health risk to the surrounding population with regard to the toxic pollutants considered. However, PM-10 and carbon monoxide are already present in the South Coast Basin at levels, which pose a hazard to human health. MVPC believes that the analysis of criteria pollutant impacts in the Air Quality section of this document demonstrate that the MVPP will not cause any new violations of state or federal air quality standards. Furthermore the proposed mitigation measures result in full mitigation of the cumulative impacts to which the MVPP will contribute. Additionally, such measures are in keeping with the Air District's plans for an orderly, basin-wide reduction of this health hazard.

Recommendations:

Since ozone, PM10, and carbon monoxide are present in the South Coast Basin at levels that exceed state and federal air quality standards, MVPC proposes the adoption of mitigation measures and conditions of certification specified in the Air Quality section to address these potential cumulative impacts. No significant public health impacts are considered to be likely with regard to toxic emissions from the proposed project. Additionally, MVPC proposes adoption of two conditions concerning the cooling towers.

MVPC'S CONDITIONS ANALYSIS

MVPP is a natural gas combined cycle project very similar to previously permitted projects. It requires conditions identical to that imposed in previously permitted projects. The disposition of all past conditions is presented here. There are no unique circumstances requiring any new or innovative conditions.

DISPOSITION OF UNIQUE CONDITIONS

UNI-PUB-1: Not needed

This unique condition was imposed upon the Sutter Power Plant. It required the project's construction contractor(s) to construct natural gas dehydrators using a design that vents emissions from glycol regeneration tanks through packed-chilled condensers to minimize hazardous air emissions. This unique condition will not apply to the MVPP because MVPP will not have a natural gas dehydrator because it utilizes only pipeline quality natural gas.

UNI-PUB-2: Applicable

This unique condition was imposed upon the Delta Energy Center. It required the project owner to perform a visual inspection of the cooling tower drift eliminator, once per calendar year. It further required the owner to repair or replace any drift eliminator components that were broken or missing. Moreover, a field representative from the

project's cooling tower vendor was to inspect the cooling tower drift eliminator and certify that the installation was performed in a satisfactory manner. Finally, continued compliance verification, for the vendor guaranteed drift, was also to be verified by the CPM in years 5 and 15. This condition is applicable to MVPP because the drift eliminator control technology proposed for use is standard to the industry, and because this condition has been generally imposed on other applicants before the CEC.

UNI-PUB-3: Not needed

This unique condition was imposed upon the Los Medanos Energy Center. It required sampling of any soil that was imported due to potential contamination for purposes of analyzing the soil for metals, total petroleum hydrocarbons (TPH) as motor oil, gasoline, and diesel, volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs). Documentation that the imported soil did not contain concentrations of these compounds in excess of health-based risk levels was also required. This unique condition is not applicable to the MVPP, as this project will not be using imported soil.

MVPC'S STIPULATED CONDITIONS OF CERTIFICATION

Pursuant to the above analysis, two unique conditions are required to ensure LORS compliance and impact mitigation. Accordingly, MVPC stipulates to the following conditions:

PUB-1: Cooling Tower Drift Eliminators Effectiveness Assurance

The project owner shall perform a visual inspection of the cooling tower drift eliminators once per calendar year, and repair or replace any drift eliminator components which are broken or missing. Prior to initial operation of the project, the project owner shall have the cooling tower vendor's field representative inspect the cooling tower drift eliminator and certify that the installation was performed in a satisfactory manner. The CPM may, in years 5 and 15 of project operation, require the project owner to perform a source test of the PM10 emissions rate from the cooling tower to verify continued compliance with the vendor guaranteed drift rate.

Triggering Situation:

Use of reclaimed water from water treatment facility made drift eliminators necessary for LORS compliance

Verification:

The project owner shall include the results of the annual inspection of the cooling tower drift eliminators and a description of any repairs performed in the next required compliance report. The initial compliance report will include a copy of the cooling tower vendor's field representative's inspection report of the drift eliminator installation.

PUB-2: Cooling Tower TCE Emission Limit

The project owner shall ensure that use of middle aquifer water is limited such that each cooling tower shall not emit more than 16 pounds of tri chloral ethylene (TCE) per year.

Protocol:

The project owner shall perform weekly samples to verify TCE content of middle aquifer water. Project owner shall monitor and record total volume of middle aquifer pumped for each week to calculate total TCE emissions. Project owner shall assume that all TCE inserted into the cooling tower system evaporates.

Verification:

In the annual compliance report, MVPP will report total TCE emissions for each cooling tower.

UNRESOLVED ISSUES IN PUBLIC HEALTH

MVPP submits this analysis and stipulated condition regarding Public Health believing that there are no outstanding or unresolved conditions requiring further discovery, analysis and/or resolution.

WORKER SAFETY AND FIRE PROTECTION

This section presents a comprehensive analysis of Worker Safety and Fire Protection issues, both in previously permitted projects and in the case of the Mountainview Power Plant (MVPP)⁵. Previously permitted projects are analyzed for their standard, categorical and unique conditions as well as what triggered each categorical and unique condition. Next, MVPP is juxtaposed with past projects allowing necessary conditions to be identified. The juxtaposition begins by a thorough review of applicable laws, ordinances, regulates and standards (LORS). Then, the setting of the MVPP in the context of worker safety and fire protection is presented. And, finally, Mountainview Power Company (MVPC) stipulates to conditions providing required mitigation and LORS compliance. The section closes by identifying any outstanding issues not resolved by the stipulated conditions.

OVERVIEW OF WORKER SAFETY & FIRE PROTECTION

The issue area of Worker Safety and Fire Protection involves employee safety and fire safety issues associated with constructing and operating power plants. Because worker safety and fire protection issues are highly important, but also consistent between all combined cycle natural gas power plants; three standard conditions were imposed upon all five previously permitted projects. No categorical or unique conditions have been set forth in any of the permitted projects.

PAST WORKER SAFETY & FIRE PROTECTION CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-SAFE-1	Create and Submit Required Safety Programs for Construction	Yes
STAN-SAFE-2	Create and Submit Required Safety Programs for Operation	Yes
STAN-SAFE-3	Exterior Lighting In Compliance	Yes

STANDARD WORKER SAFETY CONDITIONS

STAN-SAFE-1: Create and Submit Required Safety Programs for Construction
[SPP-SAFE-1]; [DEC-SAFE-1]; [LM-SAFE-1]; [HD-SAFE-1]; [LP-SAFE-1]

⁵ As in all the sections of this document, abbreviations are used for the last five permitted projects before the California Energy Commission. Those abbreviations are:

SPP = Sutter Power Plant
DEC = Delta Energy Center
LM = Los Medanos Energy Center
HD = High Desert
LP = La Paloma

Standard condition language:

Project owner shall submit a copy of the Project Construction Safety and Health Program as follows: Construction Injury and Illness Prevention Program; Construction Fire Protection and Prevention Plan; and the Personal Protective Equipment Program.

Protocol:

The Construction Injury and Illness Prevention Program and the Personal Protective Equipment Program shall be submitted to the California Department of Industrial Relations, Division of Occupational Safety and Health (CAL/OSHA) Consultation Service, for review and comment concerning compliance of the program with all applicable Safety Orders. The Construction Fire Protection and Prevention Plan shall be submitted to the County Fire Department for review and acceptance.

Verification:

At least 30 days prior to the start of construction, or a date agreed to by the CPM, the project owner shall submit to the CPM a copy of the Project Construction Safety and Health Program, incorporating Cal/OSHA's Consultation Service comments, and a letter from the County Fire Department stating that they have reviewed and accepted the Construction Fire Protection and Prevention Plan and the Personal Protective Equipment Program.

STAN-SAFE-2: Create and Submit Required Safety Programs for Operation

[SPP-SAFE-2]; [DEC-SAFE-2]; [LM-SAFE-2]; [HD-SAFE-2]; [LP-SAFE-2]

Standard condition language:

Project owner shall submit a copy of the Project Operation Safety and Health Program containing the following: Operation Injury and Illness Prevention Program; Emergency Action Plan; Operation Fire Protection Plan; and the Personal Protective Equipment Program.

Protocol:

The Operation Injury and Illness Prevention Plan, Emergency Action Plan, and Personal Protective Equipment Program shall be submitted to the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal-OSHA) Consultation Service, for review and comment concerning compliance of the program with all applicable Safety Orders.

Verification:

At least 30 days prior to the start of operation, the project owner shall submit to the CPM a copy of the final version of the Project Operation Safety & Health Program. It shall incorporate Cal/OSHA Consultation Service comments and a letter from the County Fire Department stating that they have review and accepted the specified elements of the proposed Operation Safety and Health Plan.

The project owner shall notify the CPM that the Project Operation Safety and Health Program (Injury and Illness Prevention Plan, Fire Protection Plan, Emergency Action Plan, and Personal Protective Equipment requirements), including all records and files on accidents and incidents, is present on-site and available for inspection.

STAN-SAFE-3: Exterior Lighting In Compliance

[SPP-SAFE-3]; [LM-SAFE-3]; [HD-SAFE-3]; [LP-SAFE-3]; [DEC-SAFE-3]

Standard condition language:

The project owner shall design and install all exterior lighting to meet the requirements contained in the Visual Resources Conditions of Certification and in accordance with the American National Standards Practice for Industrial Lighting, ANSI/IES-RP-7.

Protocol:

Condition has no protocol.

Verification:

Within 60 days after construction is completed, the project owner shall submit a statement to the CPM that the illuminance contained in ANSI/IES RP-7 were used as a basis for the design and installation of the exterior lighting.

WORKER SAFETY & FIRE PROTECTION ANALYSIS FOR MVPP

INTRODUCTION

This analysis presents an assessment of issues associated with the safety of workers and fire protection generated from constructing and operating the proposed MVPP. It evaluates worker safety and fire protection as legislated by laws, ordinances, regulations, and standards (LORS), and enforced through regulations codified at the Federal, State, and local levels. Worker safety is of utmost priority at the project location and is documented through worker safety practices and training. Industrial workers at the facility operate process equipment and handle hazardous materials daily, and may face hazards, which can result in accidents and serious injury. Protection measures are employed to either eliminate these hazards or minimize the risk through special training, protective equipment or procedural controls.

The purpose of this analysis is to assess the worker safety and fire protection measures proposed by for the MVPP. MVPC has filed the original Application for Certification (February 2000), the March 2000 Supplement to AFC, the Responses to Data Requests (July 2000) and Supplemental Responses to Data Requests (August 2000) to ensure that staff has sufficient information to determine that MVPC has proposed adequate measures to:

- Comply with applicable safety laws, ordinances, regulations and standards (LORS);
- Protect the workers during construction and operation of the facility;
- Protect against fire; and
- Provide adequate emergency response procedures.

MVPC has designed the features of the project in compliance with applicable LORS so as not to present unusual industrial safety or fire protection problems.

LAWS, ORDINANCES, REGULATIONS AND STANDARDS (LORS)

Federal

In December 1970 Congress enacted Public Law 91-596, the Federal Occupational Safety and Health Act of 1970 (the Act). The Act mandates safety requirements in the workplace and is found in Title 29 of the United States Code, § 651 (29 U.S.C. §§ 651 through 678). This public law is published at Title 29 of the Code of Federal Regulations, under General Industry Standards, Parts 1910.1 through 1910.1450 (29 CFR Part 1910.1 -

1910.1450). It defines the procedures for promulgating regulations and conducting inspections to implement and enforce safety and health procedures to protect workers, particularly in the industrial sector. Most of the safety and health standards now in force under the Act for general industry represent a compilation of materials authorized by the Act from existing federal standards and national consensus standards. These include standards from the voluntary membership organizations of the American National Standards Institute (ANSI), and the National Fire Protection Association (NFPA) which publishes the National Fire Codes. The Federal Department of Labor established the Occupational Safety and Health Administration (OSHA) in 1971 to discharge the responsibilities assigned by the Act.

Applicable Federal requirements include:

- 29 U.S. Code § 651 et seq. (Occupational Safety and Health Act of 1970)
- 29 CFR Part 1910.1 - 1910.1450 (Occupational Safety and Health Administration Safety and Health Regulations)
- 29 CFR Part 1952.170 – 1952.175 (Federal approval of California’s plan for enforcement of its own Safety and Health requirements, in lieu of most of the
- Federal requirements found in 29 CFR Part 1910.1 – 1910.1500)

State

California passed the Occupational Safety and Health Act of 1973 (“Cal/OSHA”) as published in the California Labor Code § 6300. Regulations resulting from the Act are published at Title 8 of the California Code of Regulations, beginning with Part 450 (8 CCR Part 450 et seq.) The California Labor Code requires that the State Standards Board must adopt standards at least as effective as the federal standards (Calif. Labor Code §142.3(a)). State Health and Safety laws meet or exceed the Federal requirements. Hence, California obtained federal approval of its State Health and Safety Regulations, in lieu of the federal requirements published at 29 CFR Parts 1910.1 - 1910.1500). The Federal Secretary of Labor, however, continually oversees California’s program and will enforce any federal standard for which the State has not adopted a Cal/OSHA counterpart. The State of California Department of Industrial Relations administers the Cal/OSHA plan and oversees industrial accidents, occupational safety and health, labor standards enforcement, statistics and research, and the State Compensation Insurance Fund (workers compensation).

Employers are responsible for informing their employees about workplace hazards, potential exposure and the work environment (Calif. Labor Code § 6408), principally through the use of the Material Safety Data Sheet (MSDS) (8 CCR § 5194). This regulation was promulgated in response to California’s Hazardous Substances Information and Training Act of 1990 (1980 Calif. § 874 and Calif. Labor Code §§ 6360-6399.7). It mirrored the Federal Hazard Communication Standard (29 CFR Part 1910.1200) which established an employee’s “right to know” about chemical hazards in the workplace.

Finally, California Senate Bill 198 required that employers establish and maintain a written Injury and Illness Prevention Program to identify workplace hazards and communicate them to its employees through a formal employee training program (8 CCR 3203).

Applicable State requirements include:

- 8 CCR § 339 - List of hazardous chemicals relating to the Hazardous Substance Information and Training Act
- 8 CCR § 450, et seq. Cal/OSHA regulations
- 24 CCR § 3, et seq. - incorporates the current edition of the Uniform Building Code
- La Follette Bill (Health and Safety Code § 25500, et seq.) - Risk Management Plan requirements for threshold quantity of listed acutely hazardous materials at the facility
- Health and Safety Code § 255000 - 25541 - Hazardous Material Business Plan detailing emergency response plans for hazardous materials emergency at the facility

Local

There are no applicable local LORS.

Industry Standards

- Uniform Fire Code – Contains provisions necessary for fire prevention and information about fire safety, special occupancy uses, special processes, and explosive, flammable, combustible, and hazardous materials.
- Uniform Fire Code Standards – Companion publication to the UFC and contains standards of the American Society for Testing and Materials and of the National Fire Protection Association (NFPA).

SETTING

The proposed facility will be located at an existing facility in San Bernardino County, which is currently being annexed by the City of Redlands. The project site consists of a total of 64 acres located adjacent to the Santa Ana River. The existing facility consists of two steam boiler generating units that feed into an immediately adjacent Southern California Edison (SCE) transmission facility and substation. The two existing units utilize groundwater in cooling towers for cooling purposes and provide a nominal gross output of 66 MW each.

The proposed new facility will utilize 18.7 already hard-packed or paved acres of the site, mostly to the North of the existing facility.

The area can be best described as an industrial region with other industrial areas and a mixture of residential and commercial zones nearby. To the North of site lies the Santa Ana River, dry most of the year, which has numerous other industrial and commercial facilities along its side. Directly across the Santa Ana River is the former Norton Air Force Base, now the San Bernardino International Airport. It primarily serves as a commercial airport with large cargo planes flying in and out on a regular basis. The Santa

Ana River itself has been highly disturbed, with reinforced or concrete channel banks, numerous surface mining operations going on to the North within the river bed.

To the East of the site lie agricultural land and a water treatment facility. To the South lies agricultural land followed by the Highway -10 freeway. To the west lie commercial, light industrial and residential areas. The residential area is a small enclave to the Southwest of the facility.

IMPACTS

Constructional Onsite Fire Suppression and Prevention

The MVPC project will rely on onsite fire protection services. The contractor will develop a Fire Protection and Prevention Plan to be followed throughout all phases of construction and provide the specified fire fighting equipment.

During construction, the permanent facility fire suppression system will be placed in service as early as practicable. The fire suppression systems for the site described in MVPC's AFC Section 2.12.2 comply with construction fire prevention regulations as set for in Title 8 CCR § 1920 et seq. Special attention will be given to operations involving open flames, such as welding, and the use of flammable liquids and gases. Personnel involved in such operations will have appropriate training by the contractor. A fire watch, utilizing the appropriate class of extinguishers or other equipment, will be maintained during hazardous or hot work operations. Site personnel will not be expected to fight fires past the incipient stage.

Materials brought onsite will conform to contract requirements, insofar as flame resistance or fireproof characteristics are concerned. Specific materials in this category include fuels, paints, solvents, plastic materials, lumber, paper boxes, and crating materials. Specific attention will be given to compressed gas, fuel solvent and paint storage.

Elements of the onsite fire suppression system during construction will consist of portable and fixed fire-fighting equipment. Portable fire fighting will consist of fire extinguishers and small hose lines in conformance with Cal-OSHA and the NFPA. The contractor's safety representative will conduct periodic fire prevention inspections. Fire extinguishers will be routinely inspected and replaced immediately, if defective, or if in need of recharge. Fire-fighting equipment will be located to allow for unobstructed access to the equipment and will be conspicuously marked. A temporary or permanent water supply will be available. Designated approved flammable materials storage areas and flammable materials storage containers will be provided with adequate fire prevention systems.

Constructional Offsite Fire Suppression

The MVPC project onsite fire suppression systems will be supported by the City of Redlands Fire Department, which will provide backup assistance. The nearest fire station is located at West Pennsylvania, a distance of five miles or approximately 12 minutes

driving time to the MVPP site. The local fire response units will be provided information regarding the type and location of potential fire hazards. This information will be included in emergency response planning. Routine fire prevention inspections will be conducted by the City of Redlands Fire Department. The City of Redlands Fire Department is currently the first responder for the existing plant at the site.

Worker Safety

Industrial environments are potentially dangerous. Workers are exposed to chemical spills, hazardous waste, fires, moving equipment, and confined space entry and egress problems. MVPC believes it is important to have well-defined policies and procedures, training, and hazard recognition and control at the facility to minimize such hazards and protect workers. During both construction and operation of the project, MVPC is responsible for all MVPC employees.

The proposed health and safety policies at MVPC provide for construction and ongoing operations, including incidental construction activities, and address safety programs, personal protection equipment and fire suppression.

MITIGATION

A Safety and Health Program has been prepared by MVPC to minimize worker hazards during operation at its current site. However, MVPC will prepare a current Safety and Health Program pursuant to the new facility hazards during both construction and operation. MVPC uses the phrase “Safety and Health Program” to refer to the measures that will be taken to ensure compliance with the applicable LORS during the construction and operational phases of the project.

Construction Safety and Health Program

The MVPC project encompasses the construction and operation of a 1,056 MW natural gas-fired facility, and construction and operation of ancillary facilities, including pipelines. The facility will incorporate three combustion turbine generators operating in combined cycle mode. Workers will be exposed to hazards typical of construction and operation of a gas-fired combined cycle facility.

Construction Safety Orders are published at Title 8 of the California Code of Regulations beginning with section 1502 (8 CCR § 1502, et seq.). These requirements are promulgated by Cal/OSHA and are applicable to the construction phase of the project.

The Construction Safety and Health Program will include the following:

- Construction Injury and Illness Prevention Program (8 CCR § 1509)
- Construction Fire Protection and Prevention Plan (8 CCR § 1920)
- Personal Protective Equipment Program (8 CCR §§ 1514 - 1522)

Additional programs under General Industry Safety Orders (8 CCR §§ 3200 - 6184), Electrical Safety Orders (8 CCR §§ 2299 - 2974), and Unfired Pressure Vessel Safety Orders (8 CCR §§ 450 - 544) will include as needed:

- Electrical Safety Program

- Unfired Pressure Vessel Safety Orders
- Equipment Safety Program
- Forklift Operation Program
- Excavation/Trenching Program
- Fall Prevention Program
- Scaffolding/Ladder Safety Program
- Articulating Boom Platforms Program
- Crane and Material Handling Program
- Housekeeping and Material Handling and Storage Program
- Hot Work Safety Program
- Respiratory Protection Program
- Confined Space Entry Program
- Hand and Portable Power Tool Safety Program
- Hearing Conservation Program
- Back Injury Prevention Program
- Hazard Communication Program

During construction, a hazard analysis will be performed to evaluate the hazards and develop appropriate programs/plans to address any hazards that are not included above. The AFC includes adequate overviews of each of the above programs. Prior to construction activities at the MVPC, detailed programs and plans will be provided to ensure compliance with the stipulated condition of certification WORKER SAFETY-1.

Operation Safety and Health Program

Upon completion of construction, existing procedures and policies will be extended to cover activities at the new operating units. Worker safety procedures for new employees will be the same as for existing operations. Operations Safety and Health Program was prepared pursuant to regulatory requirements of Title 8 of the California Code of Regulations. MVPC's Operation Safety and Health Program includes the following programs and plans:

- Injury and Illness Prevention Program (8 CCR § 3203)
- Emergency Action Program/Plan (8 CCR § 3220);
- Fire Protection and Prevention Program (8 CCR § 3221); and
- Personal Protective Equipment Program (8 CCR §§ 3401-3411)

Additional programs under General Industry Safety Orders (8 CCR §§ 3200 - 6184), Electrical Safety Orders (8 CCR §§ 2299 - 2974) and Unfired Pressure Vessel Safety Orders (8 CCR §§ 450 - 544) will include as needed:

- Motor Vehicle and Heavy Equipment Safety Program
- Forklift Operation Program
- Excavation/Trenching Program
- Fall Protection Program
- Scaffolding/Ladder Safety Program
- Crane and Material Handling Program
- Hazard Communication Program
- Hot Work Safety Program

- Respiratory Protection Program
- Electrical Safety Program
- Confined Space Entry Program
- Hand and Portable Power Tool Safety Program
- Housekeeping and Material Handling and Storage Program
- Hearing Conservation Program
- Back Injury Prevention Program
- Safe Driving Program

These plans may require updating if operations change or if new equipment is added. MVPC believes that the AFC includes adequate overviews of each of the above programs. Prior to the operation of MVPC, detailed programs and plans will be provided to comply with the stipulated condition of certification WORKER SAFETY-2.

Safety and Health Program Elements

MVPC has provided the proposed outlines for a Construction Safety and Health Program and Operation Safety and Health Program. The measures in these plans are derived from applicable sections of state and federal law. The major items required in both Safety and Health Programs are as follows:

Injury and Illness Prevention Program (IIPP)

MVPC will submit an expanded Construction and Operations Illness and Injury Prevention Program to Cal/OSHA for review and comment 30 days prior to construction of the project.

Cal/OSHA will review and provide comments on the IIPP as the result of an onsite consultation at MVPC's request. A Cal/OSHA representative will complete a physical survey of the site, analyze work practices, and assess those practices that may likely result in illness or injury. This on-site consultation will give CAL/OSHA an opportunity to evaluate MVPC's IIPP in conjunction with the activities occurring on site.

Emergency Action Plan

California regulations require an Emergency Action Plan (8 CCR § 3220) which should provide specific procedures to be followed in the event of an emergency situation. Potential emergencies include, but are not limited to, spill or release of hazardous materials, fire, explosion or natural disaster. MVPC submitted an adequate Emergency Action Plan outline in the AFC. The plan will include:

- Emergency escape procedures and emergency escape route assignments
- Procedures to be followed by employees who remain to operate critical plant operations before they evacuate
- Procedures to account for all employees after emergency evacuation has been completed
- Rescue and medical duties for employees
- Fire and emergency reporting procedures
- Alarm and communication system
- Contact personnel

- Response procedures for ammonia release (or other hazardous materials)
- Training requirements

Fire Prevention Plan

California Code of Regulations requires an Operation Fire Prevention Plan (8 CCR § 3221). The AFC did not contain a proposed fire prevention plan. The plan will need to include the following topics:

- General requirements
- Fire hazard inventory, including ignition sources and mitigation
- Housekeeping and proper materials storage
- Employee alarm/communication system
- Portable fire extinguishers
- Fixed fire fighting equipment
- Fire control
- Flammable and combustible liquid storage
- Use of flammable and combustible liquids
- Dispensing and disposal of liquids
- Training
- Contact personnel
- Local fire protection services

Personal Protective Equipment Program

California regulations stipulate that Personal Protective Equipment (PPE) and first aid supplies are required whenever hazards are encountered which, due to process, environment, chemicals or mechanical irritants can cause injury or impair bodily function as a result of absorption, inhalation or physical contact (8 CCR § 3380- 3400). MVPC's operational environment will require PPE.

The PPE Program ensures that employers comply with the applicable requirements for PPE and provide employees with the information and training necessary to implement the program.

The components of MVPC's program as outlined will include:

- Personal Protective Equipment Policy – Presents safety procedures regarding respiratory protection, eye protection, footwear and head protection. It includes the selection of suitable equipment, proper fitting, training, limitations and maintenance.
- Hard Hat Policy – Describes in additional detail the use, inspection and care of hard hats.
- Eye and Face Protection Policy – Describes the requirements for use of approved eye and face protection. It covers numerous types of eye and face protection, respective fit, inspection and care.

MVPC's PPE policies will contain the required elements to ensure compliance with all applicable regulations and so as to significantly reduce the potential impact upon workers.

General Safety

In addition to the specific plans listed above, there are additional LORS applicable to the project, which are called "safe work practices".

Safety Action Plan for Contractors

This is a guide for contractors to follow in developing their individual safety programs as required by Cal/OSHA.

Confined Space Entry

The California Code of Regulations identifies the minimal standards for preventing employee exposure to dangerous air contaminants and/or oxygen deficiency in confined spaces, where there is an oxygen-deficient atmosphere, a limited means of egress, or a source of toxic or flammable contaminants (8 CCR Sections 5156-5168). Confined spaces include silos, tanks, vats, vessels, boilers, compartments, ducts, sewers, pipelines, vaults, bins and pits. MVPC confined space entry procedures will include:

- Air monitoring and ventilation requirements
- Rescue procedures
- Lock-out / tag-out and blocking, blinding, and blanking requirements
- Permit completion
- Training

Tailgate Briefings Procedure

This procedure defines consistent format for conducting tailgate meetings that focus on work procedures necessary to safely and efficiently accomplish the job, including identifying and eliminating potential hazards to employees.

Plant Safety Committee

The Committee provides employees an opportunity to identify safety problems and recommend appropriate hazard controls to the Plant Manager. The Committee is designed to enable the employees to actively participate in various phases of the safety program, and to utilize their knowledge and experience in formulating recommendations and safety program objectives.

Hazard Communication Program

The Hazard Communications Standard establishes an employee's right to know about chemical hazards in the workplace. In accordance with Federal and State requirements, the Hazard Communication Manual for MVPC will provide information about hazardous substances and their control through a comprehensive Hazard Communication Program, which includes:

- Preparing and maintaining hazardous materials inventory list
- Providing material safety data sheets
- Training employees
- Labeling containers
- Informing employees about hazardous nonroutine tasks
- Informing contractors about potential hazards and necessary precautions

FACILITY CLOSURE

MVPC will maintain an operational fire protection system during closure activities. Additionally, the project will maintain compliance with all applicable health and safety LORS during that time.

CONCLUSION AND RECOMMENDATIONS

Conclusions:

MVPC believes that it will incorporate sufficient measures to ensure adequate levels of industrial safety, and comply with applicable LORS.

MVPP'S CONDITIONS ANALYSIS

MVPP is a natural gas combined cycle project very similar to previously permitted projects. It requires the same three standard conditions as have all previously permitted projects. The disposition of all past conditions is presented here. There are no unique circumstances requiring any new or innovative conditions.

DISPOSITION OF STANDARD CONDITIONS

STAN-SAFE-1: Applicable

This standard condition was imposed upon each of the five previously approved projects. The condition sets forth the requirement for a Construction Injury and Illness Prevention Program, Construction Fire Protection and Prevention Plan, and the Personal Protective Equipment Program. This condition is applicable to the MVPP as these plans and programs are required in order to maintain compliance with applicable LORS.

STAN-SAFE-2: Applicable

This standard condition was imposed upon each of the five previously approved projects. The condition sets forth the requirement for an Operation Injury and Illness Prevention Program, Emergency Action Plan, Operation Fire Protection Plan, and the Personal Protective Equipment Program. This condition is applicable to the MVPP as these plans and programs are required in order to maintain compliance with applicable LORS.

STAN-SAFE-3: Applicable

This standard condition was imposed upon each of the five previously permitted projects as a requirement to ensure the submittal of a Construction Injury and Illness Prevention Program and a Personal Protective Equipment Program to the California Department of Industrial Relations, Division of Occupational Safety and Health (CAL/OSHA), Consultation Service. These programs are submitted for review and comment concerning compliance of the program with all applicable Safety Orders. The Construction Fire Protection and Prevention Plan is required to be submitted to the County Fire Department for review and acceptance. This condition is applicable to the MVPP as it ensures compliance with the applicable LORS.

DISPOSITION OF CATEGORICAL CONDITIONS

N/A

DISPOSITION OF UNIQUE CONDITIONS

N/A

NEW NEEDED CONDITIONS

Standard conditions 1, 2, 3 address all worker safety LORS and impacts for MVPP. For this reason, no other conditions are required.

MVPC'S STIPULATED CONDITIONS OF CERTIFICATION

MVPC stipulates to the following conditions of certification. These conditions of certification provide assurance that the Project Construction and Operation Safety and Health Programs proposed by MVPC will be reviewed by the appropriate agencies before implementation. Furthermore, these conditions will assure mitigation of impacts to fire protection services and will require verification that the proposed plans adequately assure worker safety and fire protection are in compliance with the applicable LORS.

SAFE-1: Create and Submit Required Safety Programs for Construction

Project owner shall submit a copy of the Project Construction Safety and Health Program as follows: Construction Injury and Illness Prevention Program; Construction Fire Protection and Prevention Plan; and the Personal Protective Equipment Program.

Protocol:

The Construction Injury and Illness Prevention Program and the Personal Protective Equipment Program shall be submitted to the California Department of Industrial Relations, Division of Occupational Safety and Health (CAL/OSHA) Consultation Service, for review and comment concerning compliance of the program with all applicable Safety Orders. The Construction Fire Protection and Prevention Plan shall be submitted to the County Fire Department for review and acceptance.

Verification:

At least 30 days prior to the start of construction, or a date agreed to by the CPM, the project owner shall submit to the CPM, a copy of the Project Construction Safety and Health Program, incorporating Cal/OSHA's Consultation Service comments, and a letter from the City of Redlands Fire Department, stating that they have reviewed and accepted the Construction Fire Protection and Prevention Plan and the Personal Protective Equipment Program.

SAFE-2: Create and Submit Required Safety Programs for Operation

Project owner shall submit a copy of the Project Operation Safety and Health Program containing the following: Operation Injury and Illness Prevention Program; Emergency Action Plan; Operation Fire Protection Plan; and the Personal Protective Equipment Program.

Protocol:

The Operation Injury and Illness Prevention Plan, Emergency Action Plan, and Personal Protective Equipment Program shall be submitted to the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal-OSHA) Consultation Service, for review and comment concerning compliance of the program with all applicable Safety Orders.

Verification:

At least 30 days prior to the start of operation, the project owner shall submit to the CPM a copy of the final version of the Project Operation Safety & Health Program. It shall incorporate Cal/OSHA Consultation Service comments and a letter from the County Fire Department stating that they have reviewed and accepted the specified elements of the proposed Operation Safety and Health Plan.

The project owner shall notify the CPM that the Project Operation Safety and Health Program (Injury and Illness Prevention Plan, Fire Protection Plan, Emergency Action Plan, and Personal Protective Equipment requirements), including all records and files on accidents and incidents, is present on-site and available for inspection.

SAFE-3: Exterior Lighting in Compliance

The project owner shall design and install all exterior lighting to meet the requirements contained in the Visual Resources Conditions of Certification and in accordance with the American National Standards Practice for Industrial Lighting, ANSI/IES-RP-7.

Verification:

Within 60 days after construction is completed, the project owner shall submit a statement to the CPM that the illuminance contained in ANSI/IES RP-7 were used as a basis for the design and installation of the exterior lighting.

UNRESOLVED ISSUES IN WORKER SAFETY & FIRE PROTECTION

MVPC is not aware of any issues requiring further exploration, analysis or mitigation in the area of worker safety and fire protection. MVPC submits the above-stipulated conditions believing that the area of worker safety and fire protection will be fully addressed.

TRANSMISSION LINE SAFETY AND NUISANCE

This section presents a comprehensive analysis of Transmission Line Safety and Nuisance (TLSN) issues, both in previously permitted projects and in the case of the Mountainview Power Plant (MVPP)⁶. Previously permitted projects all combined cycle, natural gas plants are analyzed for their standard, categorical and unique conditions as well as what triggered each categorical and unique condition. Next, MVPP is juxtaposed with past projects allowing necessary conditions to be identified. The juxtaposition begins by a thorough review of applicable laws, ordinances, regulations and standards (LORS). Then, the setting of the MVPP in the context of TLSN is presented. Finally, Mountainview Power Company (MVPC) stipulates to conditions providing required mitigation and LORS compliance. The section closes by identifying any outstanding issues not resolved by the stipulated conditions.

OVERVIEW OF TRANSMISSION LINE SAFETY AND NUISANCE ISSUE AREA

The Transmission Line Safety and Nuisance ("TLSN") issue area involves assessing impacts and LORS compliance associated with constructing and operating a power plant's transmission line infrastructure and incorporation of the measures necessary for compliance with the applicable LORS. TLSN contains six simple conditions: All five recently approved combined cycle, natural gas power plants had the same six conditions imposed. No other conditions, categorical or unique have been imposed upon any of the five previously permitted projects. Below is a summary of those six standard conditions.

PAST TRANSMISSION LINE SAFETY AND NUISANCE CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-TLSN-1	Construction of Transmission Line per Regulations	Yes
STAN-TLSN-2	Identify and Correct Transmission Line Interference Problems	Yes
STAN-TLSN-3	Measure Magnetic Field Strengths	No

⁶ As in all the sections of this document, abbreviations are used for the last five permitted projects before the California Energy Commission. Those abbreviations are:

SPP = Sutter Power Plant
DEC = Delta Energy Center
LM = Los Medanos Energy Center
HD = High Desert
LP = La Paloma

STAN-TLSN-4	Keep Transmission Line Right of Way Free of Combustible	No
STAN-TLSN-5	Notice to Property Owners	No
STAN-TLSN-6	Ground Metallic Objects within Right of Way	No
CAT-TSLN-1		

STANDARD TRANSMISSION LINE SAFETY AND NUISANCE CONDITIONS

STAN-TLSN-1: Construction of Transmission Line per Regulations

[SPP-TLSN-1]; [DEC-TLSN-1]; [LM-TLSN-1]; [HD-TLSN-1]; [LP-TLSN-1]

Description of standard condition:

Project owner shall construct the proposed transmission line according to the requirements of GO-95 and Title 8, Section 2700 et seq. of the California Code of Regulations.

Protocol:

Condition has no protocol.

Verification:

Thirty days before start of transmission line construction, the project owner shall submit to the Commission's Compliance Project Manager (CPM) a letter signed by a California registered electrical engineer affirming that the transmission line will be constructed according the requirements of GO-95 and Title 8 Section 2700 et seq. of the California Code of Regulations.

STAN-TLSN-2: Identify and Correct Transmission Line Interference Problems

[SPP-TLSN-2]; [DEC-TLSN-2]; [LM-TLSN-2]; [HD-TLSN-2]; [LP-TLSN-2]

Description of standard condition:

The project owner shall make every reasonable effort to identify and correct, on a case-specific basis, all complaints of interference with radio or television signals from operation of the line and related facilities. In addition to any transmission repairs, the relevant corrective actions should include, but shall not be limited to, adjusting or modifying receivers, adjusting or repairing, replacing or adding antennas, antenna signal amplifiers, filters, or lead-in cables.

The project owner shall maintain written records for a period of five years, of all complaints of radio or television interference attributable to operation together with the corrective action taken in response to each complaint. All complaints shall be recorded to include notations on the corrective action taken. Complaints not leading to a specific action or for which there was no resolution should be noted and explained. The record shall be signed by the project owner and also the complainant, if possible, to indicate concurrence with the corrective action or agreement with the justification for a lack of action.

Protocol:

Condition has no protocol.

Verification:

All reports of line-related complaints shall be summarized and included in the Annual Compliance Report to the CPM.

STAN-TLSN-3: Measure Magnetic Field Strengths

[SPP-TLSN-3]; [DEC-TLSN-3]; [LM-TLSN-3]; [HD-TLSN-3]; [LP-TLSN-3]

Description of standard condition:

The project owner shall engage a qualified consultant to measure the strengths of the line electric and magnetic fields before beginning construction and after the line is energized. Measurements should be made at appropriate points along the route to allow verification of design assumptions relative to field strengths. The areas to be measured should include switching stations, on-site switchyards, and any residences near the right-of-way.

Protocol:

Condition has no protocol.

Verification:

The project owner shall file a copy of the first set of pre-project measurements with the CPM at least 30 days before the start of construction. The post-project measurements shall be filled within 30 days after the day the line was energized.

STAN-TLSN-4: Keep Transmission Line Right of Way Free of Combustible Material

[SPP-TLSN-4]; [DEC-TLSN-4]; [LM-TLSN-4]; [HD-TLSN-5]; [LP-TLSN-4]

Typical description of condition:

The project owner shall ensure that the transmission line right-of-way is kept free of combustible material as required under the provisions of section 4292 of the Public Resources Code and Section 1250 of the California Code of Regulations.

Protocol:

Condition has no protocol.

Verification:

The project owner shall provide a summary of inspection results and any fire prevention activities along the right-of-way in the annual compliance report.

STAN-TLSN-5: Notice to Property Owners

[SPP-TLSN-5]; [DEC-TLSN-5]; [LM-TLSN-5]; [HD-TLSN-5]; [LP-TLSN-5]

Description of standard condition:

The project owner shall send a letter to all owners of property within or adjacent to the right-of-way at least 60 days prior to first transmission of electricity.

Protocol:

The letter shall include the following:

- A discussion of the nature and operation of a transmission line.
- A discussion of the projects owner's responsibility for grounding existing fences, gates, and other large permanent chargeable objects within the right-of-way regardless of ownership.
- A discussion of the property owner's responsibility to notify the project whenever the property owner adds or installs a metallic object, which would require grounding as, noted above.

- A statement recommending against fueling motor vehicles or other mechanical equipment underneath the line.

Verification:

The project owner shall submit the proposed letter to the CPM for review and approval 30 days prior to mailing to the property owners and shall maintain a record of correspondence (notification and response) related to this requirement in a compliance file. The project owner shall notify the CPM in the first Monthly Compliance Report that letters have been mailed and that copies are on file.

STAN-TLSN-6: Ground Metallic Objects within Right of Way

[SPP-TLSN-6]; [DEC-TLSN-6]; [LM-TLSN-6]; [HD-TLSN-6]; [LP-TLSN-6]

Description of standard condition:

The project owner shall ensure the grounding of any ungrounded permanent metallic objects within the right-of-way, regardless of ownership. Such objects shall include fences, gates, and other large objects. These objects shall be grounded according to procedures specified in the National Electrical Safety Code. In the event of a refusal by the property owner to permit such grounding, the project owner shall so notify the CPM. Such notification shall include, when possible, the owner's written objection. Upon receipt of such notice, the CPM may waive the requirement for grounding the object involved.

Protocol:

Condition has no protocol.

Verification:

At least 10 days before the line is energized, the project owner shall transmit to the CPM a letter confirming compliance with this condition.

CATEGORICAL TRANSMISSION LINE SAFETY AND NUISANCE CONDITIONS

There have been no categorical conditions imposed in TSLN.

UNIQUE TRANSMISSION LINE SAFETY AND NUISANCE CONDITIONS

There have been no unique conditions imposed in TLSN.

MVPP's TRANSMISSION LINE SAFETY AND NUISANCE ANALYSIS

INTRODUCTION

The purpose of this analysis is to assess the proposed construction and operational plan for incorporation of the measures necessary for compliance with applicable LORS. Analysis will focus on issues, which relate primarily to the physical presence of the line, or secondarily to the physical interactions of line electric and magnetic fields. The following subject areas will be addressed in this analysis:

- Aviation safety;
- Interference with radio-frequency communication;
- Audible noise;
- Fire hazards;
- Hazardous shocks;
- Nuisance shocks; and,
- Electric and magnetic field (EMF) exposure.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Discussed below by subject area are design-related LORS applicable to the physical impacts of transmission lines as proposed for MVPP. The impacts of concern are addressed through specific federal or state regulations or through established industry standards and practices. There presently are no local laws or regulations specifically aimed at the physical structure or dimensions of electric power lines to limit the impacts noted above.

Aviation Safety

Any hazard to area aircraft relates to the potential for collision with the line in the navigable air space. The applicable federal LORS as discussed below are intended to ensure the distance and visibility necessary to avoid such collisions.

Federal

Title 14, Part 77 of the Federal Code of Regulations (CFR), “Objects Affecting the Navigation Space”. Provisions of these regulations specify the criteria used by the Federal Aviation Administration (FAA) for determining whether a “Notice of Proposed Construction or Alteration” is required for potential obstruction hazards. The need for such a notice depends on factors related to the height of the structure, the slope of an imaginary surface from the end of nearby runways to the top of the structure, and the length of the runway involved. Such notification allows the FAA to ensure that the structure is located to avoid any significant hazards to area aviation.

FAA Advisory Circular (AC) No. 70/460-2H, “Proposed Construction and or Alteration of Objects that may Affect the Navigation Space”. This circular informs each proponent of a project that could pose an aviation hazard of the need to file the “Notice of Proposed Construction or Alteration” (Form 7640) with the FAA.

FAA AC No. 70/460-1G, “Obstruction Marking and Lighting”. This circular describes the FAA standards for marking and lighting objects that may pose a navigation hazard as established using the criteria in Title 14, Part 77 of the CFR.

Interference with Radio-Frequency Communication

Transmission line-related radio-frequency interference is one of the indirect effects of line operation produced by the physical interactions of line electric fields. The level of such interference usually depends on the magnitude of the electric fields involved. Because of this, the potential for such impacts could be assessed from field strength estimates obtained for the line. The following regulations are intended to ensure that such lines are located away from areas of potential interference and that any interference is mitigated whenever it occurs.

Federal

Federal Communications Commission (FCC) regulations in Title 47 CFR, Section 15.25. Provisions of these regulations prohibit operation of any devices producing force fields, which interfere with radio communications, even if (as with transmission lines) such devices are not intentionally designed to produce radio-frequency energy. Such interference is due to the radio noise produced by the action of the electric fields on the surface of the energized conductor. The process involved is known as corona discharge but is referred to as spark gap electric discharge when it occurs within gaps between the conductor and insulators or metal fittings. When generated, such noise manifests as perceivable interference with radio or television signal reception or interference with other forms of radio communication. Since the level of interference depends on factors such as line voltage, distance from the line to the receiving device, orientation of the antenna, signal level, line configuration and weather conditions, maximum interference levels are not specified as design criteria for modern transmission lines. The FCC requires each line operator to mitigate all complaints about interference on a case-specific basis. Staff usually recommends specific conditions of certification to ensure compliance with this FCC requirement.

State

General Order 52 (GO-52), California Public Utilities Commission (CPUC).

Provisions of this order govern the construction and operation of power and communications lines and specifically deal with measures to prevent or mitigate inductive interference. Such interference is produced by the electric field induced by the line in the antenna of a radio signal receiver. Several design and maintenance options are available for minimizing these electric field-related impacts. When incorporated in the line design and operation, such measures also serve to reduce the line-related audible noise discussed below.

General Order 95 (GO-95), CPUC, “Rules for Overhead Electric Line Construction” specifies tree-trimming criteria to minimize the potential for power line-related fires.

Title 14 Section 1250 of the California Code of Regulations, “Fire Prevention Standards for Electric Utilities” specifies utility-related measures for fire prevention.

Title 8, CCR, Section 2700 et seq., “High Voltage Electric Safety Orders”. These safety orders establish essential requirements and minimum standards for safely installing, operating, and maintaining electrical installations and equipment.

Audible Noise

Industry Standards

There are no design-specific federal regulations to limit the audible noise from transmission lines. As with radio noise, such noise is limited instead through design and maintenance standards established from industry research and experience as effective without significant impacts on line safety, efficiency maintainability and reliability. All high-voltage lines are designed to assure compliance. Such noise usually results from the

action of the electric field at the surface of the line conductor and could be perceived as a characteristic crackling, frying or hissing sound or hum.

Since (as with communications interference), the noise level depends on the strength of the line electric field, the potential for occurrence can be assessed from estimates of the field strengths expected during operation. Such noise is usually generated during wet weather and from lines of 345 kV or higher. It is, therefore, not generally expected at significant levels from lines of less than 345 kV such as the one proposed for Pastoria. Research by the Electric Power Research Institute (EPRI 1982) has validated this by showing the fair-weather audible noise from modern transmission lines to be generally indistinguishable from background noise at the edge of a 100-ft right-of-way.

Nuisance Shocks

Industry Standards

There are no design-specific federal regulations to limit nuisance shocks in the transmission line environment. For modern high-voltage lines, such shocks are effectively minimized through grounding procedures specified in the National Electrical Safety Code and the joint guidelines of the American National Standards Institute (ANSI) and the Institute of Electrical and Electronics Engineers (IEEE).

Nuisance shocks are caused by current flow at levels generally incapable of causing significant physiological harm. They result mostly from direct contact with metal objects electrically charged by fields from the energized line. Such electric charges are induced in different ways by the line electric and magnetic fields. As with lines of the type proposed, the applicant will be responsible in all cases for ensuring compliance with these grounding-related practices within the right-of-way.

Staff usually recommends specific conditions of certification to ensure that such grounding is made within the right-of-way by both the applicant and property owners.

Fire Hazards

The fire hazards addressed through the following regulations are those that could be caused by sparks from conductors of overhead lines or that could result from direct contact between the line and nearby trees and other combustible objects.

Hazardous Shocks

The hazardous shocks that are addressed by the following regulations and standards are those that could result from direct or indirect contact between an individual and the energized line. Such shocks are capable of serious physiological harm or death and remain a driving force in the design and operation of transmission and other high-voltage lines.

Industrial Standards

There are no design-specific federal regulations to prevent hazardous shocks from power lines. Safety is assured through compliance with the requirements in the National Electrical Safety Code, Part 2: Safety Rules for Overhead Lines. These provisions specify the minimum national safe operating clearances applicable in areas where the line might be accessible to the public. They are intended to minimize the potential for direct or indirect contact with the energized line.

Electric and Magnetic Field (EMF) Exposure

The possibility of deleterious health effects from electric and magnetic field exposure has increased public concern in recent years about living near high-voltage lines. Both fields occur together whenever electricity flows, hence the general practice of considering both as EMF exposure. The available evidence as evaluated by CPUC and other regulatory agencies, has not established that such fields pose a significant health hazard to exposed humans. However, MVPC understands the importance placed upon it important by staff and the CPUC. To note that while such a hazard has not been established from the available evidence, the same evidence does not serve as proof of a definite lack of a hazard. MVPC therefore considers it appropriate, in light of present uncertainty, to reduce such fields to some degree, where feasible, until the issue is better understood. The challenge has been to establish when, and how far to reduce them.

While there is considerable uncertainty about the EMF/health effects issue, the following facts have been established from the available information and have been used to establish existing policies:

- Any exposure-related health risk to the exposed individual will likely be small.
- The most biologically significant types of exposures have not been established.
- Most health concerns are about the magnetic field.
- The measures employed for such field reduction can affect line safety, reliability, efficiency and maintainability, depending on the type and extent of such measures.

State

In California, the CPUC (which regulates the installation and operation of high-voltage lines in California) has determined that only no-cost or low-cost measures are presently justified in any effort to reduce power line fields beyond levels existing before the present health concern arose. The CPUC has further determined that such reduction should be made only in connection with new or modified lines. It required each utility within its jurisdiction to establish EMF-reducing design guidelines for all new or upgraded power lines and related facilities within their respective service areas. The CPUC further established specific limits on the resources to be used in each case for field reduction.

Such limitations were intended by the CPUC to apply to the cost of any redesign to reduce field strength or relocation to reduce exposure. Utilities not within the jurisdiction of the CPUC voluntarily comply with these CPUC requirements. This PUC policy resulted from assessments made to implement CPUC Decision 93-11-013 of 1989.

In keeping with this CPUC policy, staff requires evidence that each proposed line will be designed according to the EMF-reducing design guidelines applicable to the utility service area involved. These field-reducing measures can impact line operation if applied without appropriate regard for environmental and other local issues bearing on safety, reliability efficiency and maintainability. It is therefore, up to each applicant to ensure that such measures are applied in ways, and to an extent, without significant impacts on line operation. The extent of such applications will be reflected by the ground-level field strengths as measured during operation.

When estimated or measured for the line, such field strengths can be used by staff and other regulatory agencies for comparison with fields of lines of similar voltage and

current-carrying capacity. Such field strengths can be estimated for any given design using established procedures. Estimates are specified for a height of one meter above the ground, in units of kilovolts per meter (kV/m), for the electric field, and milligauss (mG) for the companion magnetic field. Their magnitude depends on line voltage (in the case of electric fields), the geometry of the structures, degree of cancellation from nearby conductors, distance between conductors and, in the case of magnetic fields, amount of current in the line. Since each new line in California is currently required to be designed according to the EMF-reducing guidelines of the utility in the service area involved, their fields are required under existing CPUC policies to be similar to fields from similar lines in that service area. A condition of certification is usually proposed by staff to ensure implementation of the reduction measures necessary. The applicable condition for this project is TLSN-1.

Industrial Standards

No federal regulations have been established specifying environmental limits on the strengths of fields from power lines. However, the federal government continues to conduct and encourage research necessary for an appropriate policy on the EMF issue. In the face of the present uncertainty, several states have opted for design-driven regulations ensuring that fields from new lines are generally similar to those from existing lines. Some states (Florida, Minnesota, New Jersey, New York, Montana) have set specific environmental limits on one or both fields in this regard. These limits are, however, not based on any specific health effects. Most regulatory agencies believe, as does staff, that health-based limits are inappropriate at this time. They also believe that the present knowledge of the issue does not justify any retrofit of existing lines. Before the present health-based concern developed, measures to reduce field effects from power line operations were mostly aimed at the electric field component, whose effects can manifest as the previously noted radio noise, audible noise and nuisance shocks. The present focus is on the magnetic field because only it can penetrate building materials to potentially produce the types of health impacts at the root of the present concern. As one focuses on the strong magnetic fields from the more visible transmission and other high-voltage power lines, staff considers it important for perspective, to note that an individual in a home could be exposed for short periods to much stronger fields while using some common household appliances (National Institute of Environmental Health Services and the U.S Department of Energy, 1995). Scientists have not established which of these types of exposures would be more biologically meaningful in the individual. Staff notes such exposure differences only to show that high-level magnetic field exposures regularly occur in areas other than the power line environment.

SETTING

The proposed facility will be located on an existing facility currently being annexed by the City of Redlands in San Bernardino County. The project site consists of a total of 64 acres located adjacent to the Santa Ana River. The existing facility consists of two steam boiler generating units that feed into an immediately adjacent Southern California Edison (SCE) transmission facility and substation. The two existing units utilize groundwater in cooling towers for cooling purposes and provide a nominal gross output of 66 MW each.

The proposed new facility will utilize 18.7 already hard-packed or paved acres of the site, mostly to the North of the existing facility.

The area can be best described as an industrial region with other industrial areas and a mixture of residential and commercial zones nearby. To the North of site lies the Santa Ana River, dry most of the year, which has numerous other industrial and commercial facilities along its side. Directly across the Santa Ana River is the former Norton Air Force Base, now the San Bernardino International Airport. It primarily serves as a commercial airport with large cargo planes flying in and out on a regular basis. The Santa Ana River itself has been highly disturbed, with reinforced or concrete channel banks, numerous surface mining operations going on to the North within the river bed. To the East of the Site lies agricultural land and a water treatment facility. To the South lies agricultural land followed by the Highway -10 freeway. To the west lies commercial, light industrial and residential areas. The residential area is an small enclave to the Southwest of the facility.

IMPACTS

The Systems Impact Study performed by SCE indicated that no additional transmission lines were required to interconnect the proposed generation to SCE's transmission grid. Since, no new transmission lines or transmission line upgrades are required for the interconnection of the proposed generation, no impacts will need to be mitigated.

MITIGATION

Because no new transmission lines or transmission line upgrades are required for MVPP no impacts are present that require mitigation.

Cumulative Impacts

There are no cumulative impact issues associated with transmission line safety and nuisance because no new transmission lines are required.

FACILITY CLOSURE

SCE retains ownership of all infrastructures beyond the project site. Closure of the project will require SCE to appropriately identify and handle facility closure tasks.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions:

The lack of any new transmission lines or transmission line upgrades makes transmission lines safety and nuisance non-problematic. The project should be approved with minimal conditions in this area.

MVPC'S CONDITIONS ANALYSIS

MVPP is a natural gas combined cycle project very similar to previously permitted projects because it has no new transmission lines or transmission line upgrades, however, MVPP requires only two of the six standard conditions that previously permitted projects required. The disposition of all past conditions is presented here. There are no unique circumstances requiring any new or innovative conditions.

DISPOSITION OF STANDARD CONDITIONS

STAN-TLSN-1: Applicable

This condition ensures that any and all transmission lines constructed comply with LORS though MVPP does not require new transmission lines. MVPP stipulates to this condition.

STAN-TLSN-2: Applicable

This condition ensures that any and all interference of Radio and Television signals is addressed. MVPP stipulates to this condition.

STAN-TLSN-3: Not Applicable

This condition requires measuring the magnetic field strength of transmission line facilities because there are no new facilities or lines anywhere outside of the project site. This condition is not applicable.

STAN-TLSN-4: Not Applicable

This condition ensures that no combustible material is stored in transmission line right of ways. Because MVPP does not require a transmission line to be built, nor does it require any right of ways, this condition is not applicable to MVPP.

STAN-TLSN-5: Not Applicable

This condition requires notice to all property owners within 60 feet or adjacent to new transmission line facilities. This condition is not applicable to MVPP.

STAN-TLSN-6: Not applicable

This condition ensures that all metallic objects in the right of way of a new transmission line facility are grounded. This condition is not applicable to MVPP.

MVPC'S STIPULATED CONDITIONS OF CERTIFICATION

TLSN-1: Construction of Transmission Line per Regulations

Project owner shall construct the proposed transmission line according to the requirements of GO-95 and Title 8, Section 2700 et seq. of the California Code of Regulations.

Verification:

Thirty days before start of transmission line construction, the project owner shall submit to the Commission's Compliance Project Manager (CPM) a letter signed by a California registered electrical engineer affirming that the transmission line will be constructed according to the requirements of GO-95 and Title 8 Section 2700 et seq. of the California

Code of Regulations.

TLSN-2: Identify and Correct Transmission Line Interference Problems

The project owner shall make every reasonable effort to identify and correct, on a case-specific basis, all complaints of interference with radio or television signals from operation of the line and related facilities. In addition to any transmission repairs, the relevant corrective actions should include, but shall not be limited to, adjusting or modifying receivers, adjusting or repairing, replacing or adding antennas, antenna signal amplifiers, filters, or lead-in cables.

The project owner shall maintain written records for a period of five years, of all complaints of radio or television interference attributable to operation together with the corrective action taken in response to each complaint. All complaints shall be recorded to include notations on the corrective action taken. Complaints not leading to a specific action or for which there was no resolution should be noted and explained. The record shall be signed by the project owner and also the complainant, if possible, to indicate concurrence with the corrective action or agreement with the justification for a lack of action.

Verification:

All reports of line-related complaints shall be summarized and included in the Annual Compliance Report to the CPM.

UNRESOLVED ISSUES IN TRANSMISSION LINE SAFETY AND NUISANCE

MVPC is not aware of any TLSN issues requiring further exploration, analysis or mitigation. MVPC submits the above-stipulated conditions believing that the area of TLSN will be thus fully addressed.

HAZARDOUS MATERIALS MANAGEMENT

This section presents a comprehensive analysis of Hazardous Materials Management issues, both in previously permitted projects and in the case of the Mountainview Power Plant (MVPP)⁷. Previously permitted projects are analyzed for their standard, categorical and unique conditions as well as what triggered each categorical and unique condition. Next, MVPP is juxtaposed with past projects allowing necessary conditions to be identified. The juxtaposition begins by a thorough review of applicable laws, ordinances, regulates and standards (LORS). Then, the setting of the MVPP in the context of hazardous materials is presented. And, finally, Mountainview Power Company (MVPC) stipulates to conditions providing required mitigation and LORS compliance. The section closes by identifying any outstanding issues not resolved by the stipulated conditions.

OVERVIEW OF HAZARDOUS MATERIALS MANAGEMENT ISSUE AREA

Hazardous Materials Management involves assessing issues associated with managing hazardous materials generated from constructing and operating a power plant. Because hazardous material issues from all five previously permitted projects are essentially identical, three standard conditions applied to all five projects. Both LP and HD shared a categorical condition dealing with aqueous ammonia storage and unexpected facility closure. There were no unique conditions issued for Hazardous Materials Management for any of the five previously permitted projects. MVPP stipulates to the three standard conditions set forth in all decisions.

PAST HAZARDOUS MATERIALS MANAGEMENT CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-HAZ-1	Hazardous Materials Less Than Reportable Quantities	Yes
STAN-HAZ-2	Risk Management and Safety Management Plans	Yes
STAN-HAZ-3	Adequate Funding for Fire Protection	Yes
CAT-HAZ-1	Aqueous Ammonia Storage	No

⁷ As in all the sections of this document, abbreviations are used for the last five permitted projects before the California Energy Commission. Those abbreviations are:

SPP = Sutter Power Plant
DEC = Delta Energy Center
LM = Los Medanos Energy Center
HD = High Desert
LP = La Paloma

CAT-HAZ-2	Unexpected Facility Closure Plans	No
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STANDARD HAZARDOUS MATERIALS MANAGEMENT CONDITIONS

STAN-HAZ-1: Hazardous Materials Less Than Reportable Quantities

[LP-HAZ-1]; [SPP-HAZ-1]; [DEC-HAZ-1]; [LM-HAZ-1]; [HD-HAZ-1]

Standard condition language:

The project owner shall not use any hazardous material in reportable quantities, as specified in Code of Federal Regulations, Part 40, subpart F, Section 68.130, that is not listed in Tables (vary by AFC) of the AFC, unless approved in advance by the CEC CPM.

Protocol:

Condition has no protocol.

Verification:

The project owner shall provide, in the Annual Compliance Report, a list of hazardous materials contained at the facility in reportable quantities.

STAN-HAZ-2: Risk Management and Safety Management Plans

[LP-HAZ-2, 3 & 5]; [SPP-HAZ-2]; [DEC-HAZ-2]; [LM-HAZ-2]; [HD-HAZ-3, 4 & 6]

Standard condition language:

The project owner shall provide a Risk Management Plan and Safety Management Plan to the County Fire Department and the CEC CPM for review and approval at the time the plans are first submitted to the USEPA and the California OSHA. The project owner shall reflect all recommendations of the County Fire Department and the CPM in the final document. A copy of the final plans, reflecting all comments, shall be provided to the County Fire Department and the CPM once approved by EPA and Cal OSHA.

Protocol:

Condition has no protocol.

Verification:

At least sixty (60) days prior to the delivery of anhydrous ammonia to the facility the project owner shall provide the final approved plans listed above to the CPM.

STAN-HAZ-3: Adequate Funding for Fire Protection

[LP-HAZ-3]; [SPP-HAZ-3]; [DEC-HAZ-2]; [LM-HAZ-2]

Standard condition language:

The project owner shall provide a letter from the County Fire Department indicating that adequate funding for fire protection resources has been identified and that such funding will be available to the Department as needed to ensure adequate emergency response capability.

Protocol:

Condition has no protocol.

Verification:

At least thirty (30) days prior to delivery of anhydrous ammonia to the facility, the

project owner shall provide a copy of the letter described above from the County Fire Department.

CATEGORICAL HAZARDOUS MATERIALS MANAGEMENT CONDITIONS

Two categorical conditions in the area of hazardous materials handling dealing with aqueous ammonia storage and unexpected facility closure were set forth in the previously permitted projects. They are as follows:

CAT-HAZ-1: Aqueous Ammonia Delivery or Storage Requirement

[LP-HAZ-4]; [HD-HAZ-2 & 5]

Triggering Circumstance:

Ammonia Storage Facility design or Ammonia delivery required condition to ensure adequate compliance.

Description of categorical condition:

The project owner shall design and build the aqueous ammonia storage facility as described in Attachment (see attached) following the conditions. (High Desert had two conditions regarding Aqueous Ammonia)

Protocol:

Condition has no protocol.

Verification:

At least sixty (60) days prior to the delivery of aqueous ammonia, the project owner shall provide detailed designs for the aqueous ammonia storage facility to the CPM for review and comment.

CAT-HAZ-2: Unexpected Facility Closure Plan

[LP-HAZ-5]; [HD-HAZ-6]

Triggering Circumstance:

This condition is almost identical to a Unique condition in the Waste Management issue area (UNI-Waste-2) for La Paloma (LP-Waste-4). It appears that La Paloma had no contingencies for unexpected closure or there were issues regarding unexpected closure and hazardous materials for La Paloma and High Desert.

Description of categorical condition:

Prior to commencement of commercial operation, the project owner shall submit to the CPM for review and approval Hazardous Materials Management plans as described below. These plans may be incorporated into the Facility Closure Plan and the On-Site Contingency Plans (which are required under Standard Conditions of the Compliance Plan portion of the Commission Decision).

Protocol:

For the event of a planned closure of an unexpected permanent closure of the facility, the On-site Contingency Plan (and the Facility Closure Plan, should one be submitted) shall address how all hazardous materials will be removed from the site in accordance with all applicable LORS. For the event of an unexpected temporary closure of the facility, the On-site Contingency Plan shall address how the site and the hazardous materials will be secured and maintained safely for the period of closure. For the event in which the

temporary closure is declared permanent by the CPM, the On-site Contingency Plan shall address how all materials will be removed from the site in accordance with all applicable LORS.

Verification:

At least sixty (60) days, or other time agreed to by the CPM, prior to the commencement of commercial operation, the project owner shall submit the above plans to the CPM for review and approval.

HAZARDOUS MATERIALS MANAGEMENT ANALYSIS FOR MVPP

INTRODUCTION

This analysis presents an assessment of issues associated with managing hazardous materials generated from and associated with constructing and operating the proposed MVPP. The analysis further evaluates the potential for a significant impact on the public as a result of the use, handling or storage of hazardous materials at the proposed facility. If significant adverse impacts on the public are identified, MVPP will also evaluate the potential for facility design alternatives and additional mitigation measures to reduce impacts to the extent feasible.

This analysis does not address potential exposure of workers to hazardous materials used at the proposed facility. Employers must inform employees of hazards associated with their work and thus employees, in exchange for compensation, accept a higher level of risk than would be acceptable for general public exposure. Workers are therefore not afforded the same level of protection normally provided to the public. Furthermore, workers can be provided with special protective equipment and training to reduce the potential for health impacts associated with the handling of hazardous materials (see Worker Safety and Fire Protection section).

Hazardous materials stored in small quantities, such as mineral and lubricating oils, corrosion inhibitors and water conditioners, will be present at the proposed facility. However, these materials pose little or no significant potential for off-site impacts as a result of the quantities on site, their relatively low toxicity, and/or their low environmental mobility. Although no natural gas is stored, the project will also involve the construction and operation of short natural gas pipeline connections and handling of large amounts of natural gas. Natural gas poses some risk of both fire and explosion.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

The following federal, state, and local laws and policies are applicable to the handling of hazardous materials and for the protection of public health. MVPC's analysis examines the project's compliance with these requirements.

Federal

- The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III and Clean Air Act of 1990 established a nationwide emergency planning and response program and imposed reporting requirements for businesses which store, handle, or produce significant quantities of extremely hazardous materials. The Act (codified in 40 C. F. R., § 68.110 et seq.) requires the states to implement a comprehensive system to inform local agencies and the public when a significant quantity of such materials is stored or handled at a facility. The requirements of these Acts are reflected in the California Health and Safety Code, section 25531 et seq.

State

- The California Health and Safety Code, section 25534, directs facility owners, storing or handling acutely hazardous materials in reportable quantities, to develop a Risk Management Plan (RMP) and submit it to appropriate local authorities, the United States Environmental Protection Agency (EPA), and the designated local Administering Agency for review and approval. The plan must include an evaluation of the potential impacts associated with an accidental release, the likelihood of an accidental release occurring, the magnitude of potential human exposure, any preexisting evaluations or studies of the material, the likelihood of the substance being handled in the manner indicated, and the accident history of the material. This new, recently developed program supersedes the California Risk Management and Prevention Plan (RMPP).
- Title 8, California Code of Regulations, Section 5189, requires facility owners to develop and implement effective safety management plans to insure that large quantities of hazardous materials are handled safely. While such requirements primarily provide for the protection of workers, they also indirectly improve public safety and are coordinated with the RMP process.
- Title 8, California Code of Regulations, Section 458 and Sections 500 – 515, set forth requirements for design, construction and operation of vessels and equipment used to store and transfer anhydrous ammonia. These sections generally codify the requirements of several industry codes, including the ASME Pressure Vessel Code, ANSI K61.1 and the National Boiler and Pressure Vessel Inspection Code. While these codes apply to anhydrous ammonia, they may also be used to design storage facilities for aqueous ammonia.
- California Health and Safety Code, section 41700, requires that “No person shall discharge from any source whatsoever such quantities of air contaminants or other material which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause injury or damage to business or property.”

Local

- San Bernardino County Hazardous Materials/Waste Policy HW-19 in the San Bernardino County General Plan calls for the amendment of the San Bernardino County Development Code to require new or modified businesses to complete a business plan, waste minimization plan, and if applicable, a RMP prior to final approval of a land use permit for a new business or modification of an existing business.
- San Bernardino County Hazardous Materials/Waste Policy HW-20 in the San Bernardino County General Plan states "because certain quantities of acutely hazardous materials could pose a threat to the public health and safety and the environment, this jurisdiction shall amend the San Bernardino County Development Code to require a conditional use permit for all businesses or government facilities handling acutely hazardous materials in excess of 55 gallons, 500 pounds, or 200 cubic feet."
- The City of Redlands has adopted the UFC Article 80, which is incorporated into the City of Redlands Municipal Code Title 15 Chapter 15.20. In the event that the project site is annexed to the City of Redlands, MVPC would be required to submit a HMBP to the City of Redlands Fire Department.
- San Bernardino County General Plan Policy HW-19, requires new/modified businesses to complete a business plan, waste minimization plan, and RMP prior to final plan/permit approval.
- San Bernardino County General Plan Policy HW-20, requires a conditional use permit for businesses handling acutely hazardous materials in excess of TQ (55 gals, 500 lbs, or 200 cuft.).
- City of Redlands Municipal Code Title 15 Chapter 15.20 incorporates the UFC Articles 79 and 80, as noted above.

Industry Standards

- The Uniform Fire Code (UFC) contains provisions regarding the storage and handling of hazardous materials. These provisions are contained in Articles 79 and 80. The latest revision to Article 80 was in 1997 (UFC, 1997). These articles contain minimum setback requirements for outdoor storage of ammonia.
- The California Building Code contains requirements regarding the storage and handling of hazardous materials. The Chief Building Official must inspect and verify compliance with these requirements prior to issuance of an occupancy permit.

SETTING

The proposed facility will be located on an existing facility currently being annexed by the City of Redlands in San Bernardino County. The project site consists of a total of 64

acres located adjacent to the Santa Ana River. The existing facility consists of two steam boiler generating units that feed into an immediately adjacent Southern California Edison (SCE) transmission facility and substation. The two existing units utilize groundwater in cooling towers for cooling purposes and provide a nominal gross output of 66 MW each. The proposed new facility will utilize 18.7 already hard-packed or paved acres of the site, mostly to the North of the existing facility.

The area can be best described as an industrial region with other industrial areas and a mixture of residential and commercial zones nearby. To the North of site lies the Santa Ana River, dry most of the year, which has numerous other industrial and commercial facilities along its side. Directly across the Santa Ana River is the former Norton Air Force Base, now the San Bernardino International Airport. It primarily serves as a commercial airport with large cargo planes flying in and out on a regular basis. The Santa Ana River itself has been highly disturbed, with reinforced or concrete channel banks, numerous surface mining operations going on to the North within the river bed.

To the East of the Site lies agricultural land and a water treatment facility. To the South lies agricultural land followed by the Highway -10 freeway. To the west lies commercial, light industrial and residential areas. The residential area is a small enclave to the Southwest of the facility.

IMPACTS

MVPC has determined that aqueous ammonia and natural gas are the only hazardous materials to be handled that pose a risk of off-site impacts. The following is a project specific analysis of the potential impacts associated with the handling of each of these materials.

Aqueous Ammonia

Aqueous ammonia may be used in controlling the emission of oxides of nitrogen (NO_x) from the combustion of natural gas in the facility. The accidental release of aqueous ammonia without proper mitigation can result in hazardous down-wind concentrations of ammonia gas.

To assess the potential impacts associated with an accidental release of ammonia, MVPC understands that CEC staff typically evaluates where four “bench mark” exposure levels of ammonia gas occur off-site. These include: 1) the lowest concentration posing a risk of lethality, 2,000 ppm; 2) the Immediately Dangerous to Life and Health (IDLH) level of 300 ppm; 3) the Emergency Response Planning Guideline (ERPG) level 2 of 200 ppm, which is also the RMP level 1 criterion used by EPA and California; and 4) the level considered by the Energy Commission staff to be without serious adverse effects on the public for a one-time exposure of 75 ppm. If the exposure associated with a potential release would exceed 75 ppm at any public receptor, MVPC presumes that the potential release would pose a risk of significant impact. However, MVPC will assess the probability of occurrence of the release and/or the nature of the potentially exposed population. Based on such assessment, MVPC will determine the likelihood and extent

to which potential exposure is sufficient to support a finding of a potentially significant impact.

Natural Gas

Natural gas, which will be used as a fuel by the project, poses a fire and/or explosion risk as a result of its flammability. While natural gas will be used in significant quantities, it will not be stored on-site. The risk of a fire and/or explosion from natural gas can be reduced to insignificant levels through adherence to applicable codes and the development and implementation of effective safety management practices. The National Fire Protection Association (NFPA) Code 85A requires: 1) the use of double block and bleed valves for gas shut-off; 2) automated combustion controls; and 3) burner management systems. These measures will significantly reduce the likelihood of an explosion in gas fired equipment. Additionally, start-up procedures will require air purging of the gas turbines prior to start-up, thus precluding the presence of an explosive mixture.

MITIGATION

The typical methods used, in order of preference, to avoid or minimize impacts from the accidental releases of hazardous materials are as follows:

- If feasible, use of non-hazardous or less hazardous materials;
- Use of engineered controls;
- Use of administrative controls; and,
- Emergency response planning.

MVPC has fulfilled the first method of designing and eliminating all unnecessary hazardous chemicals.

Cumulative Impacts

As proposed, the facility will cause no significant risk of off-site impacts. Thus the direct impacts of the project will not add to any existing accidental release risks, so no cumulative impacts are possible.

FACILITY CLOSURE

The expected life of MVPP's Units 3 and 4 will be 30 years. At the end of economic service, a planned closure typically occurs, where the facility is decommissioned in an orderly manner. Natural disasters or economic emergencies can also occur and cause a temporary shutdown of the facility. Whether closure is temporary or permanent, hazardous materials stored on site will be managed safely to avoid impacts to public health and safety and the environment. As described in Facility Closure (MVPC, 2000a section 4.0), a Facility Closure Plan will be submitted prior to a planned closure. An Onsite Contingency Plan will be submitted prior to a temporary or permanent closure. The preparation of these plans will serve to minimize potential closure impacts related to hazardous materials.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions:

MVPC believes that the previously described mitigation measures and conditions of certification outlined below indicate that hazardous materials will pose no potential for significant impacts on public health. With the adoption of these proposed conditions, MVPC will comply with all applicable laws, ordinances, regulations and standards.

MVPC'S CONDITIONS ANALYSIS

The three standard conditions are all required for LORS compliance and to ensure non-mitigated significant impacts.

DISPOSITION OF STANDARD CONDITIONS

STAN-HAZ-1: Applicable

Requires that project not use hazardous material in reportable quantities not approved by CEC. MVPC agrees to this condition. A final table will be presented during evidentiary hearings.

STAN-HAZ-2: Applicable

Requires various risk and safety related plans be submitted and approved. MVPC will update existing business plans, risk management plans, and safety management plans and submit them.

STAN-HAZ-3: Applicable

Requires adequate funding for fire protection. MVPC agrees with this condition.

DISPOSITION OF CATEGORICAL CONDITIONS

CAT-HAZ-1: Not Included

This condition ensured that specific design details were incorporated to ensure an adequate storage facility. MVPC believes that the overall design of the facility demonstrates compliance with all previously CEC identified criteria.

CAT-HAZ-2: Not Needed

Ensures facility closure will not endanger safety and security of any hazardous materials. Facility closure is handled as part of risk management and hazardous materials management and thus a separate condition is not needed.

NEW NEEDED CONDITIONS

The standard conditions ensure that LORS are complied with and that there are no unmitigated significant impacts. For that reason, no new conditions are required.

MVPC'S STIPULATED CONDITIONS OF CERTIFICATION

MVPC stipulates the following proposed conditions of certification to ensure that the project is designed, constructed and operated to comply with applicable laws, ordinances, regulations and standards and to protect the public from significant risk of exposure to an accidental aqueous ammonia release.

HAZ-1: Hazardous Materials Less Than Reportable Quantities

The project owner shall not use any hazardous material in reportable quantities, as specified in Code of Federal Regulations, Part 40, subpart F, Section 68.130, that is not listed in the attached Table, unless approved in advance by the CEC CPM.

Verification:

The project owner shall provide, in the Annual Compliance Report, a list of hazardous materials contained at the facility in reportable quantities.

HAZ-2: Risk Management and Safety Management Plans

The project owner shall provide an updated Risk Management Plan and Safety Management Plan to the City of Redlands Fire Department and the CEC CPM for review and approval at the time the plans are first submitted to the USEPA and the California OSHA. The project owner shall reflect all recommendations of the City of Redlands Fire Department and the CPM in the final document. A copy of the final plans, reflecting all comments, shall be provided to the City of Redlands Fire Department and the CPM once approved by EPA and Cal OSHA.

Verification:

At least sixty (60) days prior to the delivery of anhydrous ammonia to the facility the project owner shall provide the final approved plans listed above to the CPM.

HAZ-3: Adequate Funding for Fire Protection.

The project owner shall provide a letter from the City of Redlands Fire Department indicating that adequate funding for fire protection resources has been identified and that such funding will be available to the Department as needed to ensure adequate emergency response capability.

Verification:

At least thirty (30) days prior to delivery of anhydrous ammonia to the facility, the project owner shall provide a copy of the letter described above from the City of Redlands Fire Department.

UNRESOLVED ISSUES IN HAZARDOUS MATERIALS MANAGEMENT

MVPC is not aware of any hazardous materials issues requiring further exploration,

analysis or mitigation. MVPC submits the above-stipulated conditions believing that the area of hazardous materials will be fully addressed.

WASTE MANAGEMENT

This section presents a comprehensive analysis of Waste Management issues, both in previously permitted projects and in the case of the Mountainview Power Plant (MVPP)⁸. Previously permitted projects, all combined cycle, natural gas plants, are analyzed for their standard, categorical and unique conditions as well as what triggered each categorical and unique condition. Then, MVPP is juxtaposed with past projects allowing necessary conditions to be identified. A complete review of applicable laws, ordinances, regulations and standards (LORS) and the setting of the MVPP is presented. This foundation of past and present impacts and LORS allows Mountainview Power Company (MVPC) to stipulate to all necessary conditions that provide required mitigation and ensure LORS compliance. The section closes by identifying any outstanding issues not resolved by the stipulated conditions.

OVERVIEW OF WASTE MANAGEMENT ISSUE AREA

Waste management involves assessing issues associated with managing wastes generated from constructing and operating a power plant. Most waste streams from all five previously permitted projects were essentially identical and required, three standard conditions to ensure LORS compliance and mitigation. Essentially, these conditions ensure that all the typical and common waste from construction and operation of combined cycle natural gas power plants is handled and disposed of properly. Typical waste streams include concrete, plastic and metal during construction and rags, containers, water and oil. Both DEC and LM also shared a categorical condition dealing with unresolved soil contamination issues. Finally, LP had a restrictive unique condition limiting hazardous waste storage to 90 days, and a unique condition regarding unexpected closure of the facility. These conditions are summarized in the table below and presented in the following sections.

PAST WASTE MANAGEMENT CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-WASTE-1	Obtain Hazardous Waste Permissions Prior to Generating Hazardous Waste	No
STAN-WASTE-2	Report Any Waste Management Related Enforcement Action	Yes
STAN-WASTE-3	Submit Waste Management Plan	Yes

⁸ As in all the sections of this document, abbreviations are used for the last five permitted projects before the California Energy Commission. Those abbreviations are:
SPP = Sutter Power Plant
DEC = Delta Energy Center
LM = Los Medanos Energy Center
HD = High Desert
LP = La Paloma

CAT-WASTE-1	Contaminated Soil Inspection	No
UNI-WASTE-1	Make Plan for Unexpected Closure of Facility	No
UNI-WASTE-2	Storage of Hazardous Waste Limited to 90 Days	No
UNI-WASTE-3	Install forced circulation crystalizer per application	No

STANDARD WASTE MANAGEMENT CONDITIONS

STAN-WASTE-1: Obtain Hazardous Waste Permissions Prior to Generating Hazardous Waste

[LP-WASTE-2]; [SPP-WASTE-1]; [DEC-WASTE-1]; [LM-WASTE-1]; [HD-WASTE-2&4]

Standard condition language:

The project owner shall obtain a hazardous waste generator identification number and hazardous waste treatment permit for neutralization facilities from the Department of Toxic Substances Control prior to generating any hazardous waste.

Protocol:

Condition has no protocol.

Verification:

The project owner shall keep copies of the identification number and permit on file at the project site and notify the CPM via the monthly compliance report of the receipt.

STAN-WASTE-2: Report Any Waste Management-Related Enforcement Action.

[LP-WASTE-3];[SPP-WASTE-2];[DEC-WASTE-2]; [LM-WASTE-2]; [HD-WASTE-3]

Standard condition language:

The project owner shall notify the CPM of any waste management related enforcement action taken or proposed to be taken against it, or against any waste hauler or disposal facility or treatment operator that the owner contracts with.

Protocol:

Condition has no protocol.

Verification:

The project owner shall notify the CPM in writing within 10 days of becoming aware of an impending enforcement action.

STAN-WASTE-3: Submit Waste Management Plan

[LP-WASTE-1]; [SPP-WASTE-3]; [DEC-WASTE-2]; [LM-WASTE-2]; [HD-WASTE-1]

Standard condition language:

Prior to the start of both construction and of operation, the project owner shall prepare and submit to the [appropriate municipal department] and the CPM a waste management plan for all wastes generated during construction and operation of the facility, respectively. The plans shall contain, at a minimum, the following:

- A description of all waste streams, including projections of frequency, amounts generated and hazard classifications; and
- Methods of managing each waste, including treatment methods and companies contracted with for treatment services, waste testing methods to assure correct classification, methods and companies contracted with for treatment services, waste testing methods to assure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization / reduction plans.

Protocol:

Condition has no protocol.

Verification:

No less than thirty (30) days prior to the start of construction, the project owner shall submit the construction waste management plan to the [appropriate municipal department] and the CPM for review. The operation waste management plan shall be submitted no less than sixty (60) days prior to the start of project operation. The project owner shall submit any required revisions within thirty (30) days of notification of the need for such revisions by the CPM (or by a mutually agreed upon date).

In the Annual Compliance Report, the project owner shall document how actual waste management methods compared to planned management methods during the year.

CATEGORICAL WASTE MANAGEMENT CONDITIONS

There has been one categorical condition in the area of waste management dealing with unresolved soil contamination.

CAT-WASTE-1: Contaminated Soil Inspection

[DEC-WASTE-4]; [LM-WASTE-4]

Triggering Circumstance:

Unresolved issues regarding the extent of contamination in the soil that required ensuring that any potential contamination would be noticed, evaluated, and appropriately addressed.

Description of categorical condition:

If potentially contaminated soil is unearthed during excavation at either the proposed site or linear facilities as evidenced by discoloration, odor, or other signs, prior to any further construction activity at that location, an environmental professional (as defined by American Society for Testing and Materials practice E 1527-97 Standard Practice for Phase I Environmental Site Assessments) shall inspect the site, determine the need for sampling to confirm the nature and extent of the contamination and file a written report to the project owner stating the recommended course of action.

Protocol:

Condition has no protocol.

Verification:

The project owner shall notify the CPM in writing within 5 days of any reports filed by the environmental professional, and indicate if any substantive issues have been raised.

UNIQUE WASTE MANAGEMENT CONDITIONS

There have been three unique conditions in the area of waste management, these were in the LP project.

UNI-WASTE-1: Make Plan for Unexpected Closure of Facility

[LP-WASTE-4];

Triggering situation:

La Paloma may have lacked plans for unexpected closure at time of the Decision and thus, this had to be included as a condition.

Description of unique condition:

Prior to commencement of commercial operation, the project owner shall submit to the CPM for review and approval, a waste management plan for unexpected closure of the facility. The plan may be incorporated into the On-Site Contingency Plans.

Protocol:

The waste management plan shall describe how all hazardous waste and non-hazardous waste will be removed from the site in accordance with all applicable LORS in the event of an unexpected permanent closure of the facility. The waste management plan shall also describe how the hazardous waste (if allowed to remain on site longer than 90 days) will be secured and maintained safely for the period of the closure, in the event of an unexpected temporary closure of the facility. If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall submit to the CPM a revised plan.

Verification:

At least sixty (60) days prior to the commencement of commercial operation, the project owner shall submit the waste management plan for unexpected closure to the CPM for review and approval.

UNI-WASTE-2: Storage of Hazardous Waste Limited to 90 Days.

[LP-WASTE-5]

Triggering situation:

Section 66262.34 of California Code of Regulations, Title 22 usually sets the limiting period for hazardous waste storage at 90 days. Apparently, in the La Paloma case, this was an issue of concern to the CEC staff.

Description of unique condition:

No hazardous waste will be stored on site longer than ninety days unless dictated by laws, ordinances, regulations or standards.

Protocol:

Condition has no protocol.

Verification:

The project owner shall indicate in the Annual Compliance Report what hazardous wastes are stored on the site longer the ninety (90) days, and which LORS pertain.

UNI-WASTE-3: Install forced circulation crystalizer per application or obtain DTSC review.

[HD-WASTE-4]

Triggering situation:

HD planned to use a forced circulation crystalizer in its process wastewater treatment facility.

Description of unique condition:

The project owner will design and install the process wastewater treatment facility using a forced circulation crystalizer as described in the application. (Exhibit 1.) If the project owner chooses to use any other type of crystalizer, it must submit the process wastewater treatment system to the Department of Toxic Substances Control (DTSC) for review.

Protocol:

Condition has no protocol.

Verification:

At least thirty (30) days prior to the start of construction, the project owner shall submit to the CPM a copy of a flow diagram that depicts how the process wastewater would be routed to the brine concentrator and forced circulation crystalizer. The diagram shall include all auxiliary equipment associated with the process wastewater treatment system.

WASTE MANAGEMENT ANALYSIS FOR MVPP

INTRODUCTION

This analysis presents an assessment of issues associated with managing wastes generated from constructing and operating the proposed Mountainview Power Plant (MVPP). It evaluates the proposed waste management plans and mitigation measures designed to reduce the risks and environmental impacts associated with handling, storing, and disposing of project-related hazardous and nonhazardous wastes. The technical scope of this analysis encompasses wastes generated during facility construction and operation, except project wastewaters. Wastewater is discussed in the Soil and Water Resources chapter of this document. MVPC understands that the Energy Commission staff's objectives in its waste management analysis are to ensure that:

- The management of the wastes will be in compliance with all applicable laws, ordinances, regulations, and standards (LORS). Compliance with LORS ensures that wastes generated during constructing and operating the proposed project will be managed in an environmentally safe manner; and
- Disposal of project wastes will not result in significant adverse impacts to existing waste disposal facilities.

To these ends, MVPP will demonstrate compliance with the following LORS applicable to this issue.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Federal

Resource Conservation and Recovery Act - RCRA (42 U.S.C. § 6922):

RCRA establishes requirements for the management of hazardous wastes from the time of generation to the point of ultimate treatment or disposal. Section 6922 requires generators of hazardous waste to comply with requirements regarding:

- Record keeping practices which identify quantities of hazardous wastes generated and their disposition,
- Labeling practices and use of appropriate containers,
- Use of a manifest system for transportation, and
- Submission of periodic reports to the EPA or authorized state.

Title 40, Code of Federal Regulations, Part 260:

These sections contain regulations promulgated by the EPA to implement the requirements of RCRA as described above. Characteristics of hazardous waste are described in terms of ignitability, corrosivity, reactivity, and toxicity, and specific types of wastes are listed.

State

California Health and Safety Code §25100 et seq. (Hazardous Waste Control Act Of 1972, as amended):

This act creates the framework under which hazardous wastes must be managed in California. It mandates the State Department of Health Services (now the Department of Toxic Substances Control (DTSC) under the California Environmental Protection Agency, or Cal EPA) to develop and publish a list of hazardous and extremely hazardous wastes, and to develop and adopt criteria and guidelines for the identification of such wastes. It also requires hazardous waste generators to file notification statements with Cal EPA and creates a manifest system to be used when transporting such wastes.

Title 14, California Code of Regulations, §17200 Et Seq. (Minimum Standards for Solid Waste Handling and Disposal):

These regulations set forth minimum standards for solid waste handling and disposal; guidelines to ensure conformance of solid waste facilities with county solid waste management plans, as well as enforcement and administration provisions.

Title 22, California Code of Regulations, §66262.10 et seq.:

These sections establish requirements for generators of hazardous waste. Under these sections, waste generators must determine if their wastes are hazardous according to either specified characteristics or lists of wastes. As in the federal program, hazardous waste generators must obtain EPA identification numbers, prepare manifests before transporting the waste off-site, and use only permitted treatment, storage, and disposal facilities. Additionally, hazardous waste must only be handled by registered hazardous waste transporters. Generator requirements for record keeping, reporting, packaging, and labeling are also established.

Local

No local LORS were identified related to waste management. However, the following local agencies are responsible for administering state LORS.

For non-hazardous solid waste, the City of Redlands has developed a source reduction and recycle element in their general plan. The source reduction and recycle element provides for steps to reduce the generation of solid waste and slow the filling of local and regional landfills.

For wastewater, the Santa Ana RWQCB is the principal agency responsible for control of water quality and issuing permits under the regulations of the Porter-Cologne Water Quality Act.

For hazardous waste, the designated Certified Unified Program Agencies for the project site area is San Bernardino County Fire Department, Hazardous Materials Division.

SETTING

The proposed facility will be located on an existing facility currently being annexed by the City of Redlands in San Bernardino County. The project site consists of a total of 64 acres located adjacent to the Santa Ana River. The existing facility consists of two steam boiler generating units that feed into an immediately adjacent Southern California Edison (SCE) transmission facility and substation. The two existing units utilize groundwater in cooling towers for cooling purposes and provide a nominal gross output of 66 MW each. The proposed new facility will utilize 18.7 already hardpacked or paved acres of the site, mostly to the North of the existing facility.

The area can be best described as an industrial region with other industrial areas and a mixture of residential and commercial zones nearby. To the North of site lies the Santa Ana River, dry most of the year, which has numerous other industrial and commercial facilities along its side. Directly across the Santa Ana River is the former Norton Air Force Base, now the San Bernardino International Airport. It primarily serves as a commercial airport with large cargo planes flying in and out on a regular basis. The Santa Ana River itself has been highly disturbed, with reinforced or concrete channel banks, numerous surface mining operations going on to the North within the river bed.

To the East of the Site lies agricultural land and a water treatment facility. To the South lies agricultural land followed by the Highway -10 freeway. To the west lie commercial, light industrial and residential areas. The residential area is a small enclave to the Southwest of the facility.

Environmental Site Assessment

CH2M Hill completed a Phase I Environmental Site Assessment (ESA) of the power plant site on behalf of SCE in May 1997. The Phase I was completed in conformance with the scope and limitations of the American Society for Testing and Materials Practice E1527-94, "Standard Practice for Environmental Site Assessments." The Phase I ESA was included in MVPC's AFC, Appendix I.

At the time of the ESA, the power plant was operated by SCE as a peaking power plant. The assessment revealed that the following recognized environmental conditions at the power plant site:

- The power plant site is located in an area impacted by regional groundwater plumes, including the Norton Air Force Base and Redlands-Crafton plumes.
- The potential for subsurface contamination in the area of the onsite demineralizer and boiler cleaning chemical retention basins.
- Review of existing baseline tank investigation reports during the ESA indicated that soil contamination existed in the area of the above ground fuel storage tanks to a depth of one foot bags. No information regarding the cleanup of this soil was included in the Phase I report.
- During the site assessment, a representative of SCE indicated that approximately 10 cubic yards of vanadium contaminated soil was previously identified. The Phase I did not include information regarding the location of the soil or the removal of the soil.
- The onsite transformers previously contained polychlorinated biphenyl (PCB) containing transformer oil. The soil beneath the transformers could contain PCBs due to spillage or releases of PCB-containing transformer oil.
- Subsurface and above ground pipelines were previously used to convey fuel oil throughout the site. Although the pipelines had been disconnected and capped at the time of the Phase I ESA, the pipelines have never been leak-tested. Therefore, the potential exists for soil in the area of the pipelines to be impacted with fuel oil.
- Oil staining was observed on the floors of powerblock housing Units 1 and 2. Although no records or soil sampling or spills in this area were documented at the time the Phase I ESA was completed, the potential exists for oil to have seeped through cracks and joints and impacted the soils beneath the power block.
- CH2M Hill observed Oil/Water separators without leak detection systems onsite. There is the potential for soil in the area of the oil/water separators to be impacted due to breaches in the integrity of the oil/water separators.
- Staining and cracks in the floor of the chemical mixing room indicate the potential for subsurface soils to be impacted.
- At the time of the Phase I ESA, septic tanks were reported onsite. Based on the dates of operation (1952 to 1997) of the power plant by SCE, the potential exists for hazardous materials to have been washed into the septic system.

- CH2M Hill identified the potential for soil in the area of the cooling towers to contain elevated metals concentrations due to their natural occurrence and from drift from the water chemistry in the cooling towers.

These recognized, Golder Associates, Inc., further evaluated environmental conditions as discussed below:

Between December 1997 and November 1999, Golder Associates, Inc. performed subsurface site assessments at the power plant site. The site activities included: collecting soil samples; installing monitoring wells and sampling groundwater; conducting a soil gas investigation; reviewing previous environmental assessment reports related to the onsite retention basins, the fuel oil transfer tank (currently on adjacent SCE-owned parcel), and the Redlands-Crafton groundwater contamination plume; reviewing a health risk assessment; conducting a geologic hazards review; driving hollow-stem boring to determine geologic hazards; and reviewing local regulatory agency enforcement actions.

The following conclusions regarding the environmental condition of the power plant site were developed as a result of Golder's assessment:

- Golder was informed that surficial analysis for PCBs and total recoverable petroleum hydrocarbons of the soils and gravel underlying the transformers was conducted by SCE. Additionally, Golder's scope of work was to collect confirmation samples from the transformer soils to confirm that PCB or total recoverable petroleum hydrocarbons impacted soils had been removed from the site. At the time of Golder's March 1998 assessment, SCE had not completed the impacted soil removal, and Golder did not complete an assessment relating to soils in the transformer area. The final recommendation was that no remediation would be required.
- Ammonium perchlorate is present in the groundwater beneath the power plant site related to the Redlands-Crafton plume. Lockheed Corporation has been identified as the primary responsible party for the plume. Furthermore, there is no indication that past operations at the power plant site have contributed to the existing plume. The present plant design is to utilize the water located six zones below the plant for all or a portion of nonpotable water makeup to the plant. Presently, this water does not exhibit ammonium perchlorate contamination. From a review of the possible contamination potential, should the unlikely event that the Redlands-Crafton plume migrate down to the sixth zone (presently limited to the upper three zones), the amount of contamination would be significantly reduced due to dilution and have no impact on plant equipment and operations and not be a concern as a release to the environment.
- Soil and groundwater beneath the demineralizer basin located to the south of the existing boilers and the retention basin located southwest of the existing cooling towers might have been impacted. Later analysis revealed negligible impact.

- Petroleum-product leaks from an underground residual fuel oil tank located adjacent to the west of the power plant site impacted subsurface soils. However, the area of impact had not been defined at the time of Golder's March 1998 assessment. Golder conducted an additional assessment to further delineate the onsite impact from the residual fuel oil tank release in December 1998. The minor quantity of materials located in these subsurface soils, combined with the stability of the location, eliminate the need to remove this material.

An additional Phase II assessment was performed in December 1998 to evaluate soil and groundwater beneath the power plant site to determine the extent of impact related to offsite, upgradient properties and the residual fuel oil tank release. Based on the results of soil and groundwater sampling, it does not appear that either soil or groundwater beneath the power plant site was impacted by the residual fuel oil tank release. However, ammonium perchlorate was detected in the upper three zones of groundwater consistent with data previously collected regarding the regional Redlands-Crafton plume.

The May 1997 Phase I report and March 1998 and December 1998 Phase II assessment reports are included as Appendix I to MVPC's AFC (2000a).

IMPACTS

Construction Related Waste

Solid waste generated from construction activities may include lumber, plastic, scrap metal and gall, excess concrete, and empty non-hazardous containers. Management of these wastes will be the responsibility of the contractor(s). Typical management practices by the appropriate contractor include recycling when possible, proper storage of waste to prevent wind dispersion, and routine pick-up and disposal of waste to approved local Class III landfills.

Most of the hazardous waste, such as HRSG cleaning wastes and used oil, generated during construction can be recycled. The small quantities of hazardous waste that cannot be recycled are not expected to significantly impact the capacity of the Class I landfills in California.

In the unlikely event that contaminated soil is encountered during excavation activities at the proposed facility, the soil will be segregated, sampled, and tested in order to determine appropriate disposal/treatment options. If the soil is classified as hazardous (according to RCRA and CCR Title 22), the San Bernardino County Fire Department, Hazardous Material Division will be notified and the soil will be hauled to a Class I landfill or other appropriate soil treatment and recycling facility, if required. The San Bernardino County Fire Department, Hazardous Materials Division also will be notified during construction if other wells or underground storage facilities are discovered. Subsequent removal of such facilities, including potential remediation, will be conducted in accordance with CCR Title 22 and the California Health and Safety Code.

Wastewater generated at the construction sites will include sanitary wastes, dust suppression drainage, equipment wash water, and stormwater runoff. Construction-related sanitary wastes collected in portable self-contained chemical toilets, will be pumped periodically and transported by licensed contractors to a sanitary wastewater treatment facility. Stormwater runoff and dust suppression water, which may be generated during construction activities, will be managed in accordance with state and local regulatory requirements and the stormwater NPDES permit requirements applicable to the project. Equipment wastewater, with the potential for contamination will be contained at specifically designated waste areas and transported to a wastewater treatment facility via a licensed hauler. Wastewater, from wash down of concrete trucks, and other construction activities which does not have the potential to be contaminated, will be directed to the construction stormwater runoff collection system.

Operations Waste

Primary operations wastes associated with the operation of the power plant include non-hazardous wastewater. In addition, non-hazardous solid wastes will be generated on a smaller scale. Operation of the natural gas pipeline and water supply pipeline will not generate a material amount of waste. The types of waste and their estimated quantities are described below:

Non-hazardous Liquid Waste

All plant wastewater will be collected in a tank or sump and recycled to the cooling tower. Miscellaneous general plant drains will consist of area washdown, sample drains, equipment leakage, and drainage from facility equipment areas. Water from these areas will be collected in a system of floor drains, sumps, and piping and routed to the wastewater collection system. Drains that potentially could contain oil or grease will be routed through an oil/water separator. Water from the plant drains will be recycled to the wastewater storage facility and then to the cooling tower basins.

Wastewater from the power cycle makeup water treatment system will consist of the reject stream from the reverse osmosis (RO) units that will initially reduce the concentration of dissolved solids in the plant makeup water before it is treated in ion exchange vessels, and backwash water from the multi-media filters upstream of the RO units. The RO reject stream will contain the constituents of the plant raw water, concentrated approximately four times, and residues of the chemicals added to the raw water to coagulate suspended solids prior to filtration, to eliminate free chlorine that would cause damage to RO membranes, and to adjust pH to control scaling of the membranes. The filter backwash water will contain the suspended solids removed from the raw water and residues of the coagulant used to enhance filtration efficiency. These waste streams will be recycled to the wastewater storage facilities and then to the cooling tower basins.

HRSG blowdown will consist of boiler water discharged to the wastewater storage facility to control the concentration of boiler water dissolved solids within acceptable ranges.

During startup of the plant, the HRSGs and main power plant cycle piping will be chemically cleaned. Alkaline and acid solutions will be used to degrease and clean the HRSGs and piping systems. A specialty subcontractor who also will be responsible for offsite disposal and/or recycling will handle this task.

Circulating water system blowdown, when it occurs, will consist of well water up to 50 percent, clarified and filtered wastewater (depending upon satisfactory resolution of quality and treatment cost issues) which have been concentrated to approximately 20 cycles, wastewater storage facility wastewater, and residues of the chemicals added to the circulating water. This water will discharge to the SARI pipeline located at the San Bernardino Municipal WWTP. The SARI pipeline is a permitted "brine" line that terminates at the Orange County Sanitation District's Fountain Valley WWTP. Wastewater is treated at this facility and then discharged to the Pacific Ocean via a permitted ocean-outfall pipeline.

Evaporative cooler blowdown will consist of water that was circulated in the evaporative cooler system, then recycled to the wastewater storage facilities and then to the cooling tower basins.

Non-Hazardous Solid Waste

MVPC Units 3 and 4 will produce maintenance and plant wastes typical of power generation operations, including paper, wood, plastic, cardboard, broken and rusted metal and machine parts, defective or broken electrical materials, empty non-hazardous containers, cooling tower and clarifier softener sludge filter cakes, and other miscellaneous solid wastes including the typical refuse generated by workers.

Office paper, newsprint, aluminum cans, wood, insulation, yard debris, concrete, gravel, scrape metal, cardboard, glass, plastic containers, and other nonhazardous waste material will be recycled, to the extent practical, and the remainder removed on a regular basis by a certified waste handling contractor for disposal at a Class III landfill. Other nonhazardous solid waste will be picked up periodically by an authorized local hauler for transport and disposal to a suitable Class III landfill in the area.

Hazardous Solid Waste

Hazardous waste generated will include waste lubricating oil, oily rags, used batteries, used oil filters and other wastes from the CTGs and selective catalytic reductions. Table 6.12-5 of MVPC's AFC summarizes the hazardous waste to be generated from operation of the plant.

Chemical cleaning wastes will be generated from the periodic cleaning of the HRSGs. These wastes consist of alkaline and acid cleaning solutions; turbine wash and HRSG fireside wash waters. These wastes, which are subject to high metal concentrations, will be temporarily stored on site in portable tanks, and disposed off site by a chemical-cleaning contractor in accordance with applicable regulatory requirements.

MVPP will be capable of filtering cooling water obtained from the middle aquifer, which has a TCE plume. The filtering will use a recyclable carbon filter unit. Used carbon filters are a hazardous waste that will be handled accordingly.

The hazardous waste quantities generated by the facility will be minimal. The facility will continue its existing classification as a small-quantity generator. The facility will continue to have hazardous wastes collected by a licensed hazardous waste hauler and disposed of at a hazardous waste facility. Hazardous wastes being transported off-site are given a hazardous waste manifest. Copies of manifest, reports, waste analysis, exception reports, land disposal restriction notices/certificates, destruction certifications, etc. will be kept on-site and accessible for inspection for three years.

MITIGATION

As an existing facility, MVPC has a "Business Plan", Hazardous Waste Plan and a Closure Plan, all required under local regulations. As part of expansion, these plans will be updated to include new waste streams, new total volumes, and any other modifications made necessary by the new units, 3 and 4. Such modifications will include the following mitigation measures are included to assure that the project's wastes will be managed in accordance with applicable LORS:

The existing waste management plan and procedures to minimize hazardous waste generation will be updated prior to startup to assure proper storage, labeling, packaging, recordkeeping, manifesting, minimization, and disposal of hazardous materials and wastes. New employees will be trained in procedures to reduce the volume of hazardous waste generated at the proposed facility. The procurement of hazardous materials will be controlled to minimize surplus materials onsite and to prevent unused materials from becoming "off spec." Nonhazardous materials will be used in lieu of hazardous materials whenever possible. Hazardous materials will be reused or recycled whenever possible. The waste management plan contains:

- A description of each hazardous waste stream
- Handling, transport, treatment, and disposal procedures for each waste
- Preparedness, prevention, contingency, and emergency procedures
- Personnel training.

All, hazardous wastes will be stored on-site for fewer than 90 days (or other accumulation periods as allowed by 22 CCR 66262.34 for hazardous waste generators) and are managed in accordance with state and federal hazardous waste generator requirements. Hazardous wastes, as well as hazardous materials that are spilled or otherwise become unsuitable for use, are stored in an appropriately segregated hazardous waste storage area surrounded by a containment structure to control leaks and spills. The containment area will be sized to hold a volume equal to at least 110 percent of the largest tank (container) capacity. The outdoor containment structure will also have a volume equal to at least the capacity of the tank (or container) plus the volume of rainfall

from a 50-year, 24-hour storm event. The hazardous waste storage areas will be inspected and maintained at least weekly, as required.

Spill control and management procedures are included in the detailed Hazardous Waste Management Plan to be updated for the proposed expansion of the facility. The purpose of the spill control and management procedures is to avoid accidental mixing of incompatible chemicals and spills during transfer of chemicals. The design of spill control and management procedures will include the containment, collection, and treatment systems.

Facility employees receive hazardous materials training. Additionally, employees are trained in hazardous waste procedures. Hazardous waste training includes the following subjects:

- Hazardous waste characteristics
- Use and management of containers
- Waste packing
- Marking and labeling
- Accumulation/storage areas
- Inspections
- Preparedness and prevention
- Emergency equipment
- Contingency plan
- Emergency response procedures
- Hazardous waste manifesting
- Spill response and containment
- Waste minimization

Hazardous wastes will continue to be collected by a licensed hazardous waste hauler and disposed of at a waste facility. Hazardous wastes will continue to be transported offsite using a hazardous waste manifest. Copies of manifests, reports, waste analysis, exception reports, land disposal restriction notices/certifications, and destruction certification are and will continue to be kept onsite and accessible for inspection for three years.

Cumulative Impacts:

The Class I and Class III landfills in the project site area have adequate recycling and disposal capacities. Therefore, cumulative impacts from the project site and other projects in the region are not expected to be significant.

FACILITY CLOSURE

To ensure that public health and safety and the environment are protected, the existing facility closure plan will be updated to include Units 3 and 4. The facility closure plan will outline the proper steps to be taken for both permanent and temporary closure of the project facility. The closure plan will insure that the management, recycling, and/or disposal of non-hazardous and hazardous wastes is in accordance with applicable LORS.

This requirement shall be part of the waste management plan for operation submitted pursuant to waste management condition WASTE-3.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions:

Management of the wastes generated during construction and operation of MVPP will not result in any significant adverse impacts if the waste management measures proposed in the Application for Certification (00-AFC-2), the additional mitigation measures proposed by MVPC as previously addressed, and the proposed conditions of certification, below, are implemented.

Recommendations:

MVPC will have an environmental professional on site should the need for sampling of potentially contaminated soil be unearthed during excavation at the proposed site or linear facilities. The need for this environmental professional will be determined should there be evidence of discoloration, odor, or other signs of contaminated soil. If significant remediation is required, MVPC will contact representatives of the San Bernardino Environmental Health Services Department and the appropriate field office for the California Department of Toxic Substances Control for possible oversight. This will be contained within the updated waste management plan, submitted as required for waste management condition WASTE-3.

MVPC'S CONDITIONS ANALYSIS

MVPP is a natural gas combined cycle project very similar to previously permitted projects. Thus, normally, MVPP would require the same three standard conditions as have all previously permitted projects. MVPP, however, is a repowering of an existing facility thus several conditions require modification. Moreover, MVPP will not require a natural gas dehydrator. The disposition of all past conditions is presented here. There are no unique circumstances requiring any new or innovative conditions.

DISPOSITION OF STANDARD CONDITIONS

STAN-WASTE-1: Applicable

Requires that the project owner obtain appropriate permissions from DTSC prior to generating hazardous waste. MVPC agrees that these requirements are needed and stipulates to this condition.

STAN-WASTE-2: Applicable

Requires project owners to report any waste management related enforcement actions. MVPC stipulates to this condition.

STAN-WASTE-3: Applicable (with modification)

Requires project owners to submit a waste management plan for construction and for

operation. MVPC agrees that sound waste management practices include comprehensive waste management planning and thus stipulates to this condition. MVPP, however, is an existing facility with already existing waste management plans. For that reason, this condition requires modification of existing plans.

DISPOSITION OF CATEGORICAL CONDITIONS

CAT-WASTE-1: Not needed

This condition was designed to ensure that unexpected soil contaminations were identified and appropriately handled. MVPC agrees that this should be part of waste management practices. This requirement, however, should be an element of any construction waste management plan, and MVPC will include it in the waste management plan submitted for construction under the standard condition.

DISPOSITION OF UNIQUE CONDITIONS

UNI-WASTE-1: Not needed

Addresses the need to prepare for unexpected facility closure. MVPP agrees that sound waste management practices should address unexpected facility closure. This concern, however, is appropriately addressed in the waste management plan submitted for operations pursuant to STAN-WASTE-3. Moreover, MVPP has a facility closure plan for its existing facility which will be updated as part of the updates of MVPP's waste management plans. This condition is not needed.

UNI-WASTE-2: Not needed

The 90 day hazardous waste storage restriction in UNI-WASTE-2 is embodied in 22 CCR 66262.34 and is thus an appropriate part of the waste management plan submitted pursuant to STAN-WASTE-3. A separate condition is not required.

NEW NEEDED CONDITIONS

Standard conditions 2 and 3 address all waste management LORS and impacts for MVPP. For this reason, no other conditions are required.

MVPC'S STIPULATED CONDITIONS OF CERTIFICATION

Pursuant to the above analysis, three conditions, all standard, are required to ensure LORS compliance and impact mitigation. Accordingly, MVPC stipulates to the following conditions:

WASTE-1: Obtain Hazardous Waste Permissions Prior to Generating Hazardous Waste

The project owner shall obtain a hazardous waste generator identification number and hazardous waste treatment permit for neutralization facilities from the Department of

Toxic Substances Control prior to generating any hazardous waste.

Verification: The project owner shall keep copies of the identification number and permit on file at the project site and notify the CPM via the monthly compliance report of the receipt.

WASTE-2: Report Any Waste Management Related Enforcement Action.

The project owner shall notify the CPM of any waste management related enforcement action taken or proposed to be taken against it, or against any waste hauler or disposal facility or treatment operator that the owner contracts with.

Verification: The project owner shall notify the CPM in writing within 10 days of becoming aware of an impending enforcement action.

WASTE-3: Waste Management Plan

Prior to the start of both construction and of operation, the project owner shall prepare and submit to the County of San Bernardino and the CPM an updated waste management plan, business plan and facility closure plan for all wastes generated during construction and operation of the facility, respectively. The updated plans shall contain, at a minimum, the following:

- A description of all waste streams, including projections of frequency, amounts generated and hazard classifications; and
- Methods of managing each waste, including treatment methods and companies contracted with for treatment services, waste testing methods to assure correct classification, methods and companies contracted with for treatment services, waste testing methods to assure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization / reduction plans.

Verification: No less than thirty (30) days prior to the start of construction, the project owner shall submit the construction waste management plans to the County of San Bernardino and the CPM for review. The operation waste management plans shall be submitted no less than sixty (60) days prior to the start of project operation. The project owner shall submit any required revisions within thirty (30) days of notification of the need for such revisions by the CPM (or by a mutually agreed upon date).

In the Annual Compliance Report, the project owner shall document how actual waste management methods compared to planned management methods during the year.

UNRESOLVED ISSUES IN WASTE MANAGEMENT

MVPC is not aware of any waste management issues requiring further exploration, analysis or mitigation. MVPC submits the above-stipulated conditions believing that the area of waste management will be thus fully addressed.

LAND USE

This section presents a comprehensive analysis of Land Use issues, both in previously permitted projects and in the case of Mountainview Power Plant (MVPP)⁹. Previously permitted projects, all combined cycle, natural gas plants, are analyzed for their standard, categorical and unique conditions as well as what triggered each categorical and unique condition. Then, MVPP is juxtaposed with past projects allowing necessary conditions to be identified. A complete review of applicable laws, ordinances, regulations and standards (LORS) and the setting of the MVPP is presented. This foundation of past and present impacts and LORS allows Mountainview Power Company (MVPC) to stipulate to all necessary conditions that provide required mitigation and ensure LORS compliance. The section closes by identifying any outstanding issues not resolved by the stipulated conditions.

OVERVIEW OF LAND USE ISSUE AREA

The issue area of Land Use includes three standard conditions and two unique conditions that are really more detailed version of the standard conditions. Essentially, the three standard conditions ensure:

- 1) That the project have an approved development plan, (STAN-LAND-1);
- 2) That the project site plan complies with local development requirements (STAN-LAND-2); and
- 3) That linear facilities comply with local development requirements (STAN-LAND-3).

MVPC is prepared to stipulate to all three conditions. The unique conditions in this section do not have any relevance to MVPP as they are all unique to local development requirements for their respective projects.

PAST LAND USE CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-LAND-1	Development Plans Approved by Local Authority	Yes
STAN-LAND-2	Development Plans for Site in Compliance with Local Requirements	Yes
STAN-LAND-3	Development Plans for Transmission Lines and	Yes

⁹ As in all the sections of this document, abbreviations are used for the last five permitted projects before the California Energy Commission. Those abbreviations are:
SPP = Sutter Power Plant
DEC = Delta Energy Center
LM = Los Medanos Energy Center
HD = High Desert
LP = La Paloma

	Pipelines	
UNI-LAND-1	Grant Open Area Easement for Unused Property	No
UNI-LAND-2	Construct Greenbelt	No

STANDARD LAND USE CONDITIONS

STAN-LAND-1: Development Plan Approved by Local Authority

[LP-LAND-1]; [SP-LAND-2]; [DEC-LAND-3]

Standard condition language:

Project owner must submit a development plan for the site to the County for which it is located. The project owner shall not implement the plans until approved by the CPM.

Protocol:

The project owner shall:

- Submit to the CEC Compliance Project Manager (CPM) for review and approval site plans (for the power plant and electrical transition structure) as required by Design Review;
- Provide evidence that the City had been consulted regarding the plans; and
- Attach any recommendations from the City.

Verification:

At least sixty (60) days prior to the start of construction the project owner shall submit the site plans to the CPM for review and approval. The submittal shall include any recommendations from the City.

STAN-LAND-2: Development Plans for Site in Compliance with Local Requirements

[SPP-LAND-3]; [DEC-LAND-2, 3 & 8]; [LM-LAND-1, 2, 6 & 7]; [HD-LAND-1]

Standard condition language:

Site plan shall be in compliance with City and/or County requirements.

Protocol:

Condition has no protocol.

Verification:

The project owner shall submit the proposed design criteria to the CPM and the City for review and comment before implementing the work.

STAN-LAND-3: Development Plans for Transmission Lines and Pipelines

[LP-LAND-2]; [SPP-LAND-5, 7]; [DEC-LAND-4, 6]; [LM-LAND-3, 4, 5]

Standard condition language:

Minimum requirements for the location of transmission lines and pipelines closure requirements.

Protocol:

Condition has no protocol.

Verification:

At least sixty (60) days prior to the start of construction of the DEC, the project owner shall submit to the CPM a letter from the City that the project complies with the sections of the Ordinance.

UNIQUE LAND USE CONDITIONS

These unique conditions are essentially specific requirements flowing out of STAN-LAND-2 and 3.

UNI-LAND-1: Grant Open Area Easement for Unused Property

[SP-LAND-6]

Triggering situation:

The project was consuming open space and the county and local residents sought mitigation ensuring remaining areas of property would remain open.

Description of unique condition:

Project owner, or any successive landowner, shall grant to Sutter County the development rights and an open area easement on the portion of the subject property that is not identified for development on the proposed development plan.

Protocol:

Condition has no protocol.

Verification:

Prior to any site preparation work and prior to the issuance of a building permit for any construction on the project site, the project owner shall execute a conveyance of development rights and perpetual open area easement to the county of Sutter. A copy of the recorded agreement shall be provided to the CPM at least thirty (30) days prior to the initiation of any earth moving activities.

UNI-LAND-2: Construct Greenbelt

[DEC-LAND-5, 6]

Triggering situation:

The County and City of Pittsburgh sought mitigation for the additional industrial infrastructure.

Description of unique condition:

Project owner shall design, finance, and construct a linear green belt within the Eighth Street median between Harbor and Beacon Streets in a joint effort with the Pittsburgh District Energy Facility.

Protocol:

The project owner shall:

- Submit to the CPM for review and approval landscaping and irrigation plans for the Eighth Street linear park; and
- Submit the proposed landscaping and irrigation plans to the City of Pittsburgh Community Development Director and Public Services Director for review and comment.

Verification:

At least ninety (90) days prior to start of construction of the 230-kV transmission line, the project owner shall submit to the CPM for review and approval landscaping and irrigation plans for the linear green belt within the Eighth Street median. The submittal to the CPM shall include:

- Written documentation that the City of Pittsburgh Community Development Director and Public Services Director have been consulted regarding the plans;

- Any recommendation from the City of Pittsburg; and
- The Compatibility study.

LAND USE ANALYSIS FOR MVPP

INTRODUCTION

MVPC focuses on two main issues in the area of land use: 1) the project's consistency with local land use plans, ordinances and policies; and the project's compatibility with existing and planned land uses; and, 2) indirect land use impacts such as noise, traffic, visual resources, air quality, biology, transmission line safety and nuisance, or public health are discussed in those specific areas of this staff assessment.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Federal

MVPC submitted a Notice of Proposal to Construct or Alter to the FAA regarding the height of the two stack structures.

State

No applicable state LORS were identified related to land use. According to Mr. Michael Willhits of the San Bernardino County Appraiser's Office, the agricultural portion of the parcel to the north and northeast of the existing power plant site, which is planned to be purchased by MVPC, is not subject to the Williamson Act.

Local

The General Plan and Municipal Codes for the cities of Colton, Fontana, Rancho Cucamonga, Redlands, Rialto and San Bernardino will all be applicable to MVPC's construction of the gas line. A complete discussion for each of these is detailed in MVPC's AFC at 6.3-18 through and including 6.3-22. The construction of this gas line is an approved land use designation in each of these Plans. The city of Redlands general plan and municipal codes are applicable to the power plant facility.

SETTING

The proposed facility will be located on an existing facility currently being annexed by the City of Redlands in San Bernardino County. The project site consists of a total of 64 acres located adjacent to the Santa Ana River. The existing facility consists of two steam boiler generating units that feed into an immediately adjacent Southern California Edison (SCE) transmission facility and substation. The two existing units utilize groundwater in cooling towers for cooling purposes and provide a nominal gross output of 66 MW each.

The proposed new facility will utilize 18.7 already hardpacked or paved acres of the site, mostly to the North of the existing facility.

The area can be best described as an industrial region with other industrial areas and a mixture of residential and commercial zones nearby. To the North of the site lies the Santa Ana River, dry most of the year, which has numerous other industrial and commercial facilities along its side. Directly across the Santa Ana River is the former Norton Air Force Base, now the San Bernardino International Airport. It primarily serves as a commercial airport with large cargo planes flying in and out on a regular basis. The Santa Ana River itself has been highly disturbed, with reinforced or concrete channel banks, numerous surface mining operations going on to the North within the river bed. To the East of the Site lies agricultural land and a water treatment facility. To the South lies agricultural land followed by the Highway -10 freeway. To the west lies commercial, light industrial and residential areas. The residential area is a small enclave to the Southwest of the facility.

IMPACTS

Construction Phase

Power Plant

The reconfiguration of the power plant will require the replacement of some of the existing power generating equipment (cooling towers), as well as installation of new gas-fired combined cycle plant equipment.

The power plant site is consistent with zoning designations of the County of San Bernardino and the City of Redlands (for pending annexation) and therefore, no impacts to land use or zoning are expected to occur. Since the project site is already a power plant, it is consistent with the San Bernardino General Plan and the City of Redlands General Plan.

Natural Gas Pipeline

Construction activities will remain within the boundaries of the roadways. Except at the Santa Ana River and Etiwanda Wash crossings, the natural gas pipeline will be laid within city streets, and therefore, should have minimal short-term disruption to land use designations for zoning or existing land uses. In addition, the streets into which the pipeline will be laid run almost entirely through fully developed residential, industrial, and commercial areas. Only temporary construction impacts are anticipated. Potential impacts to traffic and mitigation measures are discussed in MVPC's AFC, Section 6.5 Traffic and Transportation.

In the area where the pipeline will have to traverse the Santa Ana River at Tippecanoe Avenue, the pipeline will be bored underneath the river.

As the natural gas pipeline will run through existing streets, many, if not all, already have utilities within these streets. The project is considered consistent with land use patterns

and designations. Therefore, no impacts to land use or zoning are expected to occur from the development of the natural gas pipeline.

Wastewater Pipeline Connection

The 1,100-foot wastewater pipeline will be hung on an existing bridge to cross the Twin Creek Channel just north of the Santa Ana River to connect the Santa Ana River discharge line an existing wastewater pipeline. The remainder of the pipeline is either in a golf course or within the treatment facility itself. Impacts to land use or zoning designations will not change due to the fact that the construction of the wastewater pipeline is temporary.

Operational Impacts

Power Plant Site

The project site is and has been used as a power plant since 1957. The use as a power plant is consistent with the existing land use regulations, and will be consistent with future land use regulations if the area is annexed to the City of Redlands. The power plant use will be compatible with potential planned future development in the area. Specific potential impacts to noise, traffic, biology and other environmental disciplines are discussed in other sections of this document.

Proposed Pipelines

There would be no substantial impacts to land use during normal pipeline operation, as the pipelines will run underground almost entirely through already existing city streets.

MITIGATION

The project will cause no significant adverse land use impacts and will not conflict with existing land use activities in the area. Therefore, no mitigation measures were identified.

Cumulative Impacts

Project's identified for consideration in the assessment include those: 1) where an application has been submitted to local jurisdictions for required approvals and permits; and/or, 2) that have been previously approved and may be implemented in the near future.

Information concerning potential future projects was obtained via agency contacts. The County of San Bernardino and the Cities of Colton, Fontana, Rancho Cucamonga, Redlands, Rialto and San Bernardino were contacted to determine whether projects within the County or Cities might have the potential to interact and create cumulative impacts. The County and Cities have a number of proposed and ongoing projects. However, none of these projects, independently or cumulatively, are expected to impact the proposed project or the environment.

FACILITY CLOSURE

Planned permanent closure impacts will be incorporated into the facility closure plan and evaluated at the end of the power plant's economic operation.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

MVPC believes that the proposed project will have no land use impacts that cannot be mitigated to a level below significance. If CEC staff accepts MVPC's stipulated conditions of certification and as such these conditions are implemented, the project will comply with all applicable laws, ordinances, regulations, standards, plans and policies.

MVPC'S CONDITIONS ANALYSIS

DISPOSITION OF STANDARD CONDITIONS

STAN-LAND-1: Applicable

This condition requires the project owner to submit a development plan for the site to the County for which it is located. The project owner may not implement the plans until such plans are approved by the CPM. This condition is applicable to the MVPP as it ensures compliance with the applicable LORS.

STAN-LAND-2: Applicable

This condition ensures compliance with the City/County site plan requirements. This condition is applicable to the MVPP as it ensures compliance with the applicable LORS.

STAN-LAND-3: Applicable

This condition sets forth the minimum requirements for the location of transmission lines and pipelines closure requirements. This condition is applicable to the MVPP as it ensures compliance with the applicable LORS.

DISPOSITION OF UNIQUE CONDITIONS

UNI-LAND-1: Not Needed

This condition required the Sutter Power Plant project owner, or any successive landowner, to grant Sutter County the development rights and an open area easement on the portion of the subject property that is not identified for development on the proposed development plan. This condition is not applicable to the MVPP or the MVPC as it was specific to the SPP.

UNI-LAND-2: Not Needed

This condition set forth requirements for the PEF project owner to design, finance, and construct a linear green belt within the Eighth Street median between Harbor and Beacon Streets in a joint effort with the Pittsburg District Energy Facility. This condition will not

apply to the MVPP, as it was project specific to PEF.

MVPC's STIPULATED CONDITIONS OF CERTIFICATION

LAND-1: Development Plan Approved by Local Authority

Project owner must submit a development plan for the site to the City of Redlands. The project owner shall not implement the plans until approved by the CPM.

Protocol:

The project owner shall:

- Submit to the CEC Compliance Project Manager (CPM) for review and approval sit plans (for the power plant and electrical transmission structure) as required by Design Review;
- Provide evidence that the City had been consulted regarding the plans; and
- Attach any recommendations from the City.

Verification:

At least sixty (60) days prior to the start of construction of the Project, the project owner shall submit the site plans to the CPM for review and approval. The submittal shall include any recommendations from the City.

LAND-2: Development Plans for Site in Compliance with Local Requirements

Site plan shall be in compliance with the City of Redlands Municipal Code, Title 18 (revised October 1998). Elements as part of the requirements to which the project shall conform are listed in the City of Redlands, Municipal Code, Title 18, Section 18.116 et. seq. These elements include uses generally; permitted uses; similar uses permitted by Commission determination; conditional uses; and, property development standards.

Protocol:

The project owner shall submit the proposed design criteria to the CPM and the City of Redlands for review and comment before implementing the work.

Verification:

The project owner shall provide to the CPM, in a monthly Compliance Report, evidence of compliance with Section 18.266 of the City of Redlands Municipal Code as described above.

LAND-3: Development Plans for Transmission Lines and Pipelines

Project Owner shall ensure that the natural gas pipeline is constructed in compliance with all local requirements for all cities it is constructed in and for the County of San Bernardino.

Protocol:

Project Owner shall submit and obtain approval for pipeline construction plans to:

- 1) City of Rancho Cucamonga
- 2) City of Fontana

- 3) City of Rialto
- 4) City of Colton
- 5) City of San Bernardino
- 6) City of Redlands
- 7) County of San Bernardino

Verification:

At least sixty (60) days prior to the start of construction of the pipeline, Project owner shall submit to the CPM a letter from each City and the County of San Bernardino that the natural gas pipeline project complies with city or county requirements.

UNRESOLVED ISSUES IN LAND USE

MVPC is not aware of any land use issues requiring further exploration, analysis or mitigation. MVPC submits the above-stipulated conditions believing that the area of land use will be thus fully addressed.

TRAFFIC AND TRANSPORTATION

This section presents a comprehensive analysis of Traffic and Transportation issues, both in previously permitted projects and in the case of the Mountainview Power Plant (MVPP)¹⁰. Previously permitted projects are analyzed for their standard, categorical and unique conditions as well as what triggered each categorical and unique condition. Next, MVPP is juxtaposed with past projects allowing necessary conditions to be identified. The juxtaposition begins by a thorough review of applicable laws, ordinances, regulations and standards (LORS). Then, the setting of the MVPP in the context of Traffic and Transportation is presented. And, finally, Mountainview Power Company (MVPC) stipulates to conditions providing required mitigation and LORS compliance. The section closes by identifying any outstanding issues not resolved by the stipulated conditions.

OVERVIEW OF TRAFFIC AND TRANSPORTATION ISSUE AREA

The issue area of Traffic and Transportation involves assessing the traffic and transportation impacts and LORS compliance issues arising from constructing and operating a power plant. The issue area of Traffic and Transportation contains five (5) standard conditions, two (2) categorical conditions and three (3) unique conditions.

PAST TRAFFIC AND TRANSPORTATION CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-TRANS-1	Compliance with Cal Trans Limits On Vehicle Size and Weight	Yes
STAN-TRANS-2	Compliance with Cal Trans & County Limitations on Encroachment	Yes
STAN-TRANS-3	Compliance with State and Federal Regulations for Transport of Hazardous Materials	Yes
STAN-TRANS-4	Construction Traffic Control Plan and Implementation Program	Yes
STAN-TRANS-5	Roadway Repairs	Yes
CAT-TRANS-1	Designated Route Requirements	Yes

¹⁰ As in all the sections of this document, abbreviations are used for the last five permitted projects before the California Energy Commission. Those abbreviations are:

SPP = Sutter Power Plant
DEC = Delta Energy Center
LM = Los Medanos Energy Center
HD = High Desert
LP = La Paloma

CAT-TRANS-2	Construction Work Hours to Avoid Peak Traffic Hours	No
UNI-TRANS-1	Safety Plan	No
UNI-TRANS-2	Construction of Water Lines	No
UNI-TRANS-3	Part 77 Requirements	No

STANDARD TRAFFIC AND TRANSPORTATION CONDITIONS

STAN-TRANS-1: Compliance with CalTrans Limits On Vehicle Size and Weight [LM-TRANS-2]; [SPP-TRANS-1]; [LP-TRANS-1]; [DEC-TRANS-2]; [HD-TRANS-1] ***Standard condition language:***

The project owner shall comply with California Department of Transportation (CalTrans) and County limitation on vehicle sizes and weights. In addition, the project owner or its contractor shall obtain necessary transportation permits from CalTrans and all relevant jurisdictions for both rail and roadway use.

Protocol:

Condition has no protocol.

Verification:

In monthly compliance reports, the project owner shall submit copies of any oversize and overweight transportation permits received during that reporting period. In addition, the project owner shall retain copies of these permits and supporting documentation in its compliance file for at least six months after the start of commercial operation.

STAN-TRANS-2: Compliance with CalTrans & County Limitations on Encroachment

[LM-TRANS-3&9]; [SPP-TRANS-2]; [LP-TRANS-2]; [DEC-TRANS-3&9]; [HD-TRANS-2]

Standard condition language:

The project owner or its contractor shall comply with CalTrans and County limitations for encroachment into public right-of-way and shall obtain necessary encroachment permits from CalTrans and all relevant jurisdictions.

Protocol:

Condition has no protocol.

Verification:

In monthly compliance reports, the project owner shall submit copies of any encroachment permits received during that reporting period. In addition, the project owners shall retain copies of these permits and supporting documentation in its compliance file for at least six months after the start of commercial operation.

STAN-TRANS-3: Compliance with State and Federal Regulations for Transport of Hazardous Materials

Standard condition language:

[LM-TRANS-4]; [SPP-TRANS-3]; [LP-TRANS-3]; [DEC-TRANS-4]; [HD-TRANS-3]

The project owner shall ensure that all federal and state regulations for the transport of hazardous materials are observed.

Protocol:

Condition has no protocol.

Verification:

The project owner shall include in its monthly compliance reports copies of all permits and licenses acquired by the project owner and/or subcontractors concerning the transport of hazardous substances.

STAN-TRANS-4: Construction Traffic Control Plan and Implementation Program
[LM-TRANS-5]; [SPP-TRANS-6]; [LP-TRANS-4]; [DEC-TRANS-5]; [HD-TRANS-6]

Standard condition language:

Prior to start of construction, the project owner shall consult with county and will prepare a construction traffic control plan and implementation program which includes addressing the timing of heavy equipment and building materials deliveries; signing, lighting and traffic control device placement for natural gas pipeline and transmission line construction; and establishing construction work hours outside of peak traffic periods.

Protocol:

Condition has no protocol.

Verification:

Thirty days prior to construction, the project owner shall provide to the CPM and to Sutter County Public Water Works Department for review and approval a copy of its construction traffic control plan and implementation program.

STAN-TRANS-5: Roadway Repairs

[LM-TRANS-6]; [SPP-TRANS-7]; [LP-TRANS-6]; [DEC-TRANS-6]

Standard condition language:

Based on determined primary roadways to be used in the traffic control plan and implementation program and following construction of the power plant and all related facilities, the licensee shall repair those primary roadways to original or as near original condition as possible.

Protocol:

Condition has no protocol.

Verification:

Thirty days (30) prior to construction, the licensee shall photograph the primary roadways. The licensee shall provide the CPM and Sutter County with a copy of these photographs. Within thirty days (30) days of the completion of project construction, the licensee will meet with the CPM and Sutter County Public Works Department to determine and receive approval for the actions necessary and schedule to complete the repair of those roadways to original condition as possible.

CATEGORICAL TRAFFIC & TRANSPORTATION CONDITIONS

Two categorical conditions have been set forth in the previously permitted projects with

regard to the area of traffic and transportation. These conditions deal with the routing of equipment vehicles and the mitigation measures to assist in avoiding impacts to peak traffic periods.

CAT-TRANS-1: Designated Route Requirements

[LM-CAT-TRANS-1]; [SPP-CAT-TRANS-4]; [DEC-CAT-TRANS-1]

Triggering Circumstance:

Designated routes were necessary to ensure trucks did not go through residential areas, in front of schools etc.

Description of categorical condition:

Project Owner shall require all truck traffic use the designated route [description of designated route].

Protocol:

Condition has no protocol.

Verification:

The project owner shall include this specific route in its contracts for truck deliveries and maintain copies onsite for inspection by the CPM.

CAT-TRANS-2: Construction Work Hours to Avoid Peak Traffic Hours

[LM-CAT-TRANS-7]; [DEC-UNI-TRANS-7]

Triggering Circumstance:

Potential for project related construction to effect peak traffic periods.

Description of categorical condition:

The owner shall schedule construction work hours for project site that avoids morning (7 a.m. to 9 a.m.) and evening (4p.m. to 6 p.m.) peak hour traffic periods (includes heavy truck traffic).

Protocol:

Condition has no protocol.

Verification:

The project owner shall maintain a delivery log, which specifies, in part, the time and date of each delivery in the on-site compliance file.

UNIQUE TRAFFIC AND TRANSPORTATION CONDITIONS

Three unique conditions have been imposed in the area of traffic and transportation and read as follows:

UNI-TRANS-1: Safety Plan

[LP-UNI-TRANS-5]

Triggering Situation:

Cable stringing presented danger to people and property beneath.

Description of unique condition:

The project owner or its contractor shall install crossing structures and netting across major thoroughfares as a safety precaution to reduce the potential for damage from falling construction materials or equipment during cable-stringing activities. Prior to start of construction, the project owner shall consult with CalTrans, and prepare and submit to the CPM a safety plan and implementation program.

Protocol:

Condition has no protocol.

Verification:

At least thirty days (30) days prior to start of construction, the project owner shall provide to the CPM, for review and approval, a copy of its safety plan and implementation program.

UNI-TRANS-2: Construction of Water Lines

[DEC-CAT-TRANS-8]

Triggering Situation:

The area of businesses involved could have had significant business interruption without such requirements to provide access.

Description of unique condition:

Construction of reclaimed water supply and wastewater discharge lines along a [particular street] shall provide for vehicular access to business and for emergency vehicle access.

Protocol:

The project owner shall contact the businesses that utilize Archy Lane to discuss scheduling of pipeline construction activities, and establish appropriate construction timeframes for pipeline activities along roadways.

Verification:

The project owner shall in the Monthly Compliance Reports to the CPM, report on the use of the above measures in the construction of the underground pipeline. The condition shall be reflected in the construction traffic control plan and implementation program. The Monthly Compliance Reports shall also identify any alternative measures that were used to minimize impacts.

UNI-TRANS-3: Part 77 Requirements

[HD-UNI-TRANS-4]

Triggering Situation:

Aviation related impacts/ LORS from High Desert required this condition.

Description of unique condition:

The project owner shall submit a copy of the letter from the Federal Aviation Administration verifying compliance of the project with Part 77 requirements.

Protocol:

Condition has no protocol.

Verification:

Prior to commencing construction, the project owner shall submit to the CPM the required FAA letter.

MVPC's TRAFFIC AND TRANSPORTATION ANALYSIS

INTRODUCTION

The analysis of the issue area of traffic and transportation addresses the extent to which the MVPP project may impact the transportation system within the vicinity of its proposed location. The analysis includes the evaluation and identification of:

- The influx of construction workers for the project and how they could increase roadway congestion and affect traffic flow during the course of construction;
- The roads and routings which the project proposes to use;
- Potential traffic related problems associated with those routes;
- The anticipated delivery of oversize/overweight equipment that could cause increased roadway congestion and increased traffic hazards;
- The anticipated encroachment upon public right-of-ways during the construction of the proposed project and associated appurtenant facilities;
- The frequency of trips and probable routes associated with the delivery of hazardous materials; and
- The availability of alternative transportation methods such as rail.

MVPC has analyzed further information provided by other sources to determine the potential for the project to have significant traffic and transportation impacts and to assess the availability of mitigation measures, which could reduce or eliminate the significance of those impacts. Additionally, MVPC is prepared to stipulate to several proposed conditions of certification, which are included herewith, to implement the appropriate mitigation measures and to ensure that the project complies with the applicable Laws, Ordinances, Regulations and Standards (LORS).

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Federal

The federal government addresses transportation of goods and materials in Title 49, Code of Federal Regulations:

- The Title 49, Code of Federal Regulations, section 171-177, governs the transportation of hazardous materials, the type of materials defined as hazardous, and the marking of the transportation vehicles.
- Title 49, Code of Federal Regulations, section 350-399, and Appendices A-G, Federal Motor Carrier Regulations, addresses safety considerations for the transport of goods, materials and substances over public highways.

State

The California Vehicle Code and the Streets and Highways Code contain requirements applicable to the licensing of drivers and vehicles, the transportation of hazardous

materials and right-of-way. In addition, the California Health and Safety Code addresses the transportation of hazardous materials. Specifically, these codes include:

- California Vehicle Code, section 353, defines hazardous materials.
- California Vehicle Code, sections 31303-31309, regulates the highway transportation of hazardous materials, the routes used, and restrictions thereon.
- California Vehicle Code, section 31030, requires that permit applications shall identify the commercial shipping routes they propose to utilize for particular waste streams.
- California Vehicle Code, sections 31600-31620, regulates the transportation of explosive materials.
- California Vehicle Code, sections 32000-32053, regulates the licensing of carriers of hazardous materials and includes noticing requirements.
- California Vehicle Code, sections 32100-32109, establishes special requirements for the transportation of inhalation hazards and poisonous gases.
- California Vehicle Code, sections 34000-34121, establishes special requirements for the transportation of flammable and combustible liquids over public roads and highways.
- California Vehicle Code, sections 34500, 34501, 34501.2, 34501.4, 34501.10, 34505.5-7, 34507.5 and 34510-11, regulate the safe operation of vehicles, including those which are used for the transportation of hazardous materials.
- California Vehicle Code, sections 2500-2505, authorize the issuance of licenses by the Commissioner of the California Highway Patrol for the transportation of hazardous materials including explosives.
- California Vehicle Code, sections 13369, 15275, and 15278, address the licensing of drivers and the classifications of licenses required for the operation of particular types of vehicles. In addition, it requires the possession of certificates permitting the operation of vehicles transporting hazardous materials.
- California Streets and Highways Code, sections 117 and 660-72, and California Vehicle Code 35780 et seq., require permits for the transportation of oversized loads on county roads.
- California Streets and Highways Code, sections 660, 670, 1450, 1460 et seq., 1470, and 1480, regulate right-of-way encroachment and the granting of permits for the encroachment on state and county roads.

- California Health and Safety Code, sections 25160 et seq., address the safe transport of hazardous materials.

Local

Most communities also have LORS that specifically affect the traffic associated with the project. The following paragraphs summarize the LORS for each of the cities where traffic will be affected by construction of the proposed power plant site and linear facilities.

- The City of San Bernardino requires a Street/Utility Improvement Plan to be prepared when an extensive length of trench will be made in the city streets, and no separate Encroachment Permit or Street-Cut Permit are required upon the approval of the Street/Utility Improvement Plan. A comprehensive Traffic Control Plan is also required by the city if the project will impede the normal progression of traffic, no separate Lane-Closure Permit or Oversized Vehicle Permit is required upon the approval of the comprehensive Traffic Control Plan. The city also mandates that no trench works be done between the last week of November to the following January 1st of any year.
- The City of Rancho Cucamonga requires a Construction Permit (City Ordinance 12-03) and a Traffic Control Plan (City Ordinance 12-03.140) for any project that would require excavation in the city streets. No separate Encroachment Permit or Street-Cut Permit is required upon the approval of the Construction Permit.
- The City of Colton requires a Street-Cut Permit (City Ordinance 8-75) and a Traffic Control Plan (no specific ordinance or code – California Department of Transportation Manual Section 5-1.1) for any project that would require excavation in the city streets. No separate Encroachment Permit is required upon the approval of the Street-Cut Permit. The city also requires that patches for all trenches satisfy the city’s standard, and trenches exceeding 400 feet in length, require re-paving of the entire lane.
- The City of Redlands requires an Encroachment Permit (City Ordinance 12-16) and a Traffic Control Plan (City Ordinance 10-2) for any project that would require excavation in the city streets. For oversized vehicles traveling on city streets other than the designated truck routes, a Truck Route Permit (City Ordinance 10-54) is also required. No separate Oversized Vehicle Permit is required upon the approval of the Truck Route Permit.
- City of Redlands Guiding policies for standards of traffic service that are applicable to the proposed project includes Policy 5.20a and 5.20c. Policy 5.20a states “maintain LOS C or better as the standard at all intersection presently at LOS C or better.” Policy 5.20c states “Where current LOS at a location within the City of Redlands is below the LOS C standard, no development project shall be approved that cannot be mitigated so that it does not reduce the LOS at that location.”

- The City of Rialto requires a Construction Permit (Municipal Code 11.04) and a Traffic Control Plan (Municipal Code 11.04) for any project that would require excavation in the city streets. No separate Encroachment Permits or Street-Cut Permits are required upon the approval of the Construction Permit.
- The City of Fontana requires an Excavation Permit (City Ordinance 17-61) and a Traffic Control Plan (no specific ordinance or code – California Department of Transportation Manual Section 5-1.1) for any project that requires excavation in the city streets. The City of Fontana uses the California Department of Transportation Manual. No separate Encroachment Permit is required upon the approval of the Excavations Permit.
- The County of San Bernardino requires an Excavation Permit (County Ordinance 8-15) for any project that requires excavation in the County roadways. No separate Encroachment Permit is required upon the approval of the Excavation Permit. The County also requires an Oversized Vehicle Permit (California Vehicle Code Section 35780) for transporting oversized or excessive loads on County roadways.
- County of San Bernardino General Plan Policy TC-6a states that the County shall “approve development proposals only when they are consistent with the County’s objective of maintaining a LOS C on highways and intersections affected by the development.”

SETTING

The proposed facility will be located on an existing facility currently being annexed by the City of Redlands in San Bernardino County. The project site consists of a total of 64 acres located adjacent to the Santa Ana River. The existing facility consists of two steam boiler generating units that feed into an immediately adjacent Southern California Edison (SCE) transmission facility and substation. The two existing units utilize groundwater in cooling towers for cooling purposes and provide a nominal gross output of 66 MW each. The proposed new facility will utilize 18.7 already hard-packed or paved acres of the site, mostly to the North of the existing facility.

The area can be best described as an industrial region with other industrial areas and a mixture of residential and commercial zones nearby. To the North of the site lies the Santa Ana River, dry most of the year, which has numerous other industrial and commercial facilities along its side. Directly across the Santa Ana River is the former Norton Air Force Base, now the San Bernardino International Airport. It primarily serves as a commercial airport with large cargo planes flying in and out on a regular basis. The Santa Ana River itself has been highly disturbed, with reinforced or concrete channel banks, numerous surface mining operations going on to the North within the river bed.

To the East of the site lie agricultural land and a water treatment facility. To the South lies agricultural land followed by the Highway -10 freeway. To the west lie commercial,

light industrial and residential areas. The residential area is a small enclave to the Southwest of the facility.

Existing Roadways

The surrounding roadway system, including freeway access points, is illustrated in Figure 6.5-1 of MVPC's AFC (2000a). Signalized intersections along the pipeline route are illustrated in Figure 6.5-2 of MVPC's AFC (2000a).

Regional and interregional access for the project area is provided by a system of freeways, highways and local arterials. The San Bernardino Freeway (Interstate 10) which passes from east to west about 0.75 miles south of the project site, is the major east-west freeway that provides access west to Los Angeles and east to the desert communities. Interstate 215 provides north-south freeway access to Riverside and San Diego Counties to the south and the high desert communities to the north. State Route 30, which passes about two miles east of the project site, provides local east-west service between Interstate 215 and western San Bernardino County. The nearest access point from the power plant to the freeways is the Mountain View Avenue Interchange at I-10, located approximately 0.75 miles south of the power plant site.

The major north-south roadways in the area of the power plant include Mountain View Avenue, Alabama Street and California Street. Mountain View Avenue is an undivided two-lane roadway, which runs north-south adjacent to the west of the site. Alabama Street is an undivided two-lane roadway, which runs north-south approximately 1.5 miles east of the power plant site. This is one of the primary arterials connecting the City of Redlands to the community of Highland. California Street is an undivided two-lane roadway, which runs north-south approximately 0.75 miles east of the power plant site and provides an access corridor from Interstate 10.

The major east-west roadways in the area of the power plant include San Bernardino Avenue and Lugoinia Avenue. San Bernardino Avenue is a two-lane secondary arterial located adjacent to the south of the power plant site that connects the Cities of Redlands and San Bernardino. Lugoinia Avenue is a major arterial that parallels Interstate 10 approximately 0.5 miles south of the power plant site.

The following roadways will be potentially affected by construction of the proposed pipelines: Arrow Route Highway, Cherry Avenue, Merrill Avenue, Mill Street, Tippecanoe Avenue, and San Bernardino Avenue. Arrow Route Highway is a two-lane undivided east-west primary arterial. Cherry Avenue is a four-lane north-south major arterial, with a center median between Arrow Route Highway and Merrill Avenue.

Merrill Avenue is an east-west secondary arterial east of Cherry Avenue, and is a four-lane undivided arterial with exceptions between Cherry Avenue and Beech Avenue and is a two-lane undivided arterial between Cedar and Riverside Avenues. Mill Street is the continuation of Merrill Avenue and is a four-lane divided primary arterial except between Rancho Avenue and Mount Vernon Avenue where it is only two lanes. Tippecanoe Avenue is a north-south, four-lane road divided primary arterial east of Mill Street.

Road classification, design capacity, current average daily and peak traffic hour counts, and levels of service (LOS) for these streets are shown in Table 6.5-1 of MVPC's AFC (2000a). Roadway classifications for the above-referenced streets were obtained by consulting the General plans for the County of San Bernardino as well as for the cities of Rancho Cucamonga, Fontana, Rialto, San Bernardino, Colton and Redlands. According to information included in the General plans, there are no weight or load limitations for the above-described road segments. It is estimated that the current traffic stream on these roadways is approximately five percent trucks.

Bus Routes

Public transportation in the project vicinity is provided by Omnitrans, the regional operator for San Bernardino County. Omnitrans provides fixed route bus services, dial-a-ride service and dial-a-lift service for the handicapped. Omnitrans bus routes potentially in the project vicinity are shown in Figure 6.5-3 of MVPC's AFC (2000a). Omnitrans Routes 15 and 8 travel along many segments of the proposed natural gas pipeline route. Several other north-south trending Omnitrans routes briefly cross the proposed natural gas pipeline route. These routes have the potential to experience temporary delays during pipeline construction.

Bike Routes

There are two bikeways that could be affected by the pipeline construction, as shown on Figure 6.5-4 of MVPC's AFC (2000a). One of the routes is the segment on Merrill Avenue between Mango Avenue and Alder Avenue in the City of Fontana. The bike route also crosses Merrill Avenue at Citrus Avenue, Juniper Avenue and Mango Avenue. It is classified as a Class III Bikeway, which, per CalTrans standards has no special lane markings. The roadway is identified as a bicycle facility by "Bike Route" signs, and its right of way is shared with pedestrians and motorists. Bicycles are only a secondary usage.

Railroad Operations

Burlington Northern-Santa Fe and Metrolink railroads operate active main line and spur tracks in the project vicinity. The Burlington Northern-Santa Fe line runs in a generally east-west direction south of the power plant site. The line provides freight service for the industrial uses in the project area. The Metrolink line runs in a generally east-west direction north of the proposed natural gas pipeline route. This line is the primary commuter/passenger rail system in southern California. Burlington Northern-Santa Fe line crossings exist at Mountain View Avenue south of the power plant site, Mill Street approximately 0.25 miles west of the intersection of Mill Street and Waterman Avenue, and at Cherry Avenue approximately 0.125 miles north of Merrill Avenue (track shared with Metrolink).

Transportation Improvements

According to information provided by the City of Redlands Public Works Department, there are no new or planned transportation improvements in the immediate vicinity of the power plant site. The City of Redlands' general approach to roadway improvements in the area of the power plant is to complete improvements in conjunction with or immediately prior to any approved proposed property development (Fujiwara, 1999). In general, the roadways in the project area, particularly those to the west and south of the power plant site, have not been developed to County of San Bernardino standards, due to the agricultural nature of the traffic and transportation (EVCSP 1999). However, roadway improvements such as installing signals, widening, and adding turn lanes, are planned as set forth in the East Valley Corridor Specific Plan (EVCSP) in conjunction with future development.

Airport

The MVPC project site is located approximately 4,000 feet south of the San Bernardino International Airport. The airport is a 2,100-acre facility that was formerly known as Norton Air Force Base, which was closed in 1994. The Inland Valley Development Agency and San Bernardino International Airport Authority are regional Joint Powers Authorities formed after closure of Norton Air Force Base to redevelop the property. Currently, the airport is a full-service commercial airport with a 10,000-foot runway, a newly remodeled terminal area, and aircraft maintenance facilities.

The volume of traffic at the airport in 1999 totaled 30,000 take-offs and landings (Rey 1999). The airport traffic volume is expected to increase, with an increase in both cargo flights and passenger flights. Currently, there is no air traffic control to direct aircraft operations in and around the airport. Aircraft will indicate take-off and landing intentions by communicating with each other on a common radio frequency (Rey 1999).

Road Features Affecting Public Safety

The construction of the proposed pipelines will require trenching in the city streets. Most of the work areas are along a tangent segment on Merrill Avenue/Mill Street. Those areas that vary from the tangent alignment are at the intersections of Arrow Route and Cherry Avenue, Cherry Avenue and Merrill Avenue, Mill Street and Tippecanoe Avenue, and Tippecanoe Avenue and San Bernardino Avenue. All of these intersections are controlled with traffic signals with the exception of Cherry Avenue and Merrill Avenue.

The west leg of this intersection is a private road, and the intersection functions as an uncontrolled T-intersection. There is a stop sign on the east leg of Merrill Avenue, and there are no stop signs for either direction of Cherry Avenue. From past studies, intersections without traffic controls tend to have higher accident rates than controlled intersections, and it is recommended that temporary stop signs or other equivalent methods be posted at both directions of Cherry Avenue during the construction in this segment.

As stated in the California Department of Transportation Traffic Manual, temporary Traffic Control Plans will be required to delineate the work space for workers,

equipment, and material. Effective Traffic Control Plans must provide safety for the workers, road users, and pedestrians alike.

IMPACTS

Summary of Construction-Related Impacts

The following street segments will operate at or above their designed capacity during pipeline construction: Arrow Route between Etiwanda Avenue and Cherry Avenue, Mill Street between Rancho Avenue and E Street, Tippecanoe between Mill Street and San Bernardino Avenue between Tippecanoe Avenue and Mountain View Avenue. Of these segments, Arrow Route between Etiwanda Avenue and Cherry Avenue and Mill Street between Rancho Avenue and Mt. Vernon Avenue are currently at LOS F even without a lane closure.

Significant impacts on Mountain View Avenue are not expected during power plant construction because the increase in the average daily traffic on Mountain View Avenue north of I-10 from 8,000 vehicles per day to approximately 9,100 vehicles per day, is below the design capacity of 12,000 vehicles per day. In addition, the LOS of this segment of Mountain View Avenue would change from B to C during the construction period, which is within both the City of Redlands General Plan and County of San Bernardino General Plan guidelines.

MVPP has reviewed the current AM and PM peak hour traffic volumes, number of lanes capacity and existing level of service (LORS) for 18 signalized intersections impacted either by pipeline construction or delivery of construction. The analysis concludes that the 18 reviewed signalized intersections operating below capacity, with the highest utilization of available capacity were operating at LOS “C” or better. This is within the criteria for usage of these roadways during peak hours.

Operations Phase Impacts

When operating, traffic will be limited to onsite employees and deliveries, none of which will rise to a level sufficient to affect intersections or traffic patterns.

Pipeline Operation

Traffic associated with operation of the proposed natural gas and water supply pipelines will be limited to occasional preventive maintenance or repair vehicles. Therefore, no operations impacts related to the proposed pipelines are expected.

Power Plant Operations

Upon the completion of the construction phase, the trips generated by the power plant will be based on the number of its full time employees and periodic truck deliveries/pickups. There will be 33 full time workers including 18 shift operators, 8 plant support staff, and 7 management staff. Support staff and management staff will be working on Monday through Friday, 8 hours per day. The shift operators will be working on an 8 hour shift rotation with 4 operators during a shift. Thus, during morning peak hours, there will be 19 passenger car trips entering the power plant, and 4 passenger car

trips leaving the power plant. During evening peak hours, there will be 4 passenger car trips entering the power plant and 19 passenger car trips leaving the power plant. Transportation impacts associated with power plant operations are not expected to be significant because the LOS on Mountain View and San Bernardino Avenues would remain unchanged from the existing LOS. Additionally, trips to the plant site due to truck deliveries, vendors, consultants, and other non-plant personnel are expected to be minimal and are likely to occur during non-peak commute periods.

During plant operations, trucks will periodically deliver various cleaning chemicals, gasoline and diesel fuel, lubricants, aqueous ammonia, sulfuric acid, and other hazardous materials associated with plant operations. It is expected that there will be two truck deliveries per day to the project site for the delivery of hazardous materials such as aqueous ammonia, sulfuric acid, sodium hypochlorite, sodium hydroxide, gasoline, etc. Aqueous ammonia and sulfuric acid are considered inhalation hazards and would be subject to California Vehicle Codes 31303 and 32105, which requires hazardous materials to be transported along the shortest route possible and that transporters obtain a Hazardous Materials Transportation License from the CHP.

Deliveries of hazardous materials will occur over pre-arranged routes in compliance with applicable LORS. Therefore, traffic impacts related to the transport of hazardous materials to the power plant site are not expected to be significant.

MVPC submitted a Notice of Proposed Construction or Alteration to the FAA in accordance with the requirements outlined in Title 14, Federal Code of Regulations, Section 77.17. MVPC is awaiting a determination from the FAA regarding the affects of the proposed project on a navigable airspace.

Operational impacts of the proposed power plant site on the traffic at the San Bernardino International Airport was analyzed by comparing the height of the proposed exhaust stacks to the height of the imaginary surface established by the FAA in Title 14, Code of Federal Regulations, Sections 77.21, 77.23, and 77.25. The imaginary surface extends 10,260 feet from the center of the runway at the San Bernardino International Airport.

The height of the imaginary surface (located at the nearest exhaust stack, which is 3,300 feet south of the airport runway center line) is 150 feet above the established airport elevation. An object or structure that will penetrate this 150 foot floor is considered to be a hazard to air navigation. The established airport elevation is 1,157 feet above sea level, therefore, any object or structure higher than 1,307 feet above sea level would be a hazard to air navigation. The MVPC project site is located at 1,105 feet above sea level and the proposed exhaust stacks will be 200 feet in height, making the total height of the stacks 1,305 feet above sea level. Therefore, the proposed stack height of 200 feet will not intrude into the established horizontal imaginary surface.

MITIGATION

The proposed pipeline construction will occur mostly along roadways that currently carry low traffic volumes, and most of these roadways will continue to operate at an acceptable LOS during the construction. MVPC proposes the following mitigation measures, which are summarized as follows:

- Provide Omnitrans information a minimum of 7 days in advance regarding location and durations of construction and any bus stops impacted by traffic control plans.
- Provide a TCP for the entire length of roadway where the pipeline is to be constructed.
- Install a temporary all-way stop at Cherry Avenue and Merrill Avenue during the period where construction is underway at this location, or other appropriate measures.
- For pipeline construction along Arrow Route between Etiwanda Avenue and Cherry Avenue, Mill Street between Rancho Avenue and E Street, Tippecanoe Avenue between Mill Street and San Bernardino Avenue, and San Bernardino Avenue between Tippecanoe Avenue and Mountain View Avenue, construction may be restricted to non peak periods (9:00 am to 4:00 p.m. and 6:00 p.m. to 7:00 am) to reduce the impact. Advanced warning signs and detour signs will also be incorporated in the TCP on these segments to encourage drivers to use alternative routes such as Rialto Avenue and Foothill Boulevard.
- At those locations where at least 20 feet of pavement for two-way traffic cannot be maintained during construction on any roadway segment, a one-way operation with flagger traffic control will be provided.
- The TCP will minimize the total length of roadway under construction at any one time to avoid having long stretches of roadway out of service but with no construction on-going.
- A Traffic Management Program (TMP) will be developed to ensure that the project traffic (including truck traffic with passenger car equivalent of three) plus existing traffic on the segment of Mountain View Avenue north of I-10 shall not exceed 700 passenger vehicles during any given hour of a day.
- To achieve this goal. One or more of the following measures may be used: encourage employees to carpool to work and/or develop additional vanpooling or other ridesharing programs; request workers to use other access roads than Mountain View Avenue, and stagger the arrival and departure time of the construction workers.

Cumulative Impacts

Information concerning proposed projects was obtained by contacting the County of San Bernardino and the Cities of Redlands and San Bernardino to determine whether projects

in the immediate vicinity of the power plant site have the potential to interact and create cumulative impacts. Projects identified for consideration in the assessment include those: 1) where an application has been submitted to local jurisdictions for required approvals and permits; and/or, 2) that have been previously approved and may be implemented in the near future.

The County and Cities have a number of proposed and ongoing projects. However, none of these projects, independently or cumulatively, are expected to impact traffic and transportation in the immediate vicinity of the proposed project because they would not require construction access of the same roadways as the power plant site.

The major potential source of new traffic beyond the timeframe of currently proposed projects in the County and Cities is the East Valley Corridor Specific Plan (EVCSP), which is located immediately adjacent to the west and south of the power plant site. It is estimated that 90,000 jobs are expected to be created in the planning area due to the development of future industrial, commercial, and residential properties. The EVCSP planning area is located adjacent to the west and south of the power plant site. See Section 6.3 (Land Use) for the jurisdictional boundaries of the EVCSP. The EVCSP has policies in place to insure that development occurs in an orderly and systematic manner, and that access in the planning area is improved to accommodate traffic volumes generated by development. Therefore, cumulative traffic impacts from the proposed power plant expansion and development in the EVCSP area will be mitigated by the policies set forth in the EVCSP.

FACILITY CLOSURE

In the event of facility closure, MVPC will comply with applicable LORS related to transportation permits for hazardous materials and equipment deliveries and removal. The effects on traffic and transportation for temporary closure are expected to be similar to those associated with project operation and therefore minimal. Permanent closure impacts are expected to be similar to those associated with project construction and will affect the LOS of Mountain View and San Bernardino Avenues. However, a Facility Closure Plan will be prepared prior to permanent closure and will address mitigation measures to minimize impacts to these roadways.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions:

Below, conclusions are presented for the power plant and for the linear facilities.

Power Plant

MVPC has determined that the construction phase will indeed cause increased roadway demand resulting from the daily movement of workers and materials. While noticeable, however, such demand will not increase beyond the thresholds established in the LOS requirements by local and regional authorities.

During the construction phase, MVPC proposes to work with CalTrans, San Bernardino County and all city officials to maintain traffic flow and safety. This would be done by the utilization of proper signs and traffic control measures in accordance with CalTrans, San Bernardino County and all city requirements during peak hours.

During the operational phase, increased roadway demand resulting from the daily movement of workers and materials will be minimal.

All transportation and handling of hazardous substances and materials can be mitigated to insignificance by compliance with federal and state standards established to regulate such substances and materials.

Linear Facilities

Construction will require trenching within public road rights-of-way; the installation of underground facilities will impact both roadway function and levels of service. However, these impacts are expected to be short term and not result in significant traffic and transportation impacts. MVPC intends to provide appropriate traffic control measures. In addition, all development will take place in compliance with CalTrans and San Bernardino County limitations for encroachment into public rights-of-way.

Recommendations:

In light of the aforementioned conclusions, MVPC believes that there will be no significant adverse impacts in the area of traffic and transportation as a result of the project. To this end, MVPC is prepared to stipulate to the following conditions of certification.

MVPC'S CONDITIONS ANALYSIS

Below MVPC considers the applicability of all past conditions.

DISPOSITION OF STANDARD CONDITIONS

STAN-TRANS-1: Applicable

CalTrans requires limits on vehicle size and weight. This condition will apply to MVPP and stipulates to this condition.

STAN-TRANS-2: Applicable

Requires compliance with CalTrans and County Limitations on encroachment into public right-of-way. MVPP agrees that this is a standard issue and stipulates to this condition.

STAN-TRANS-3: Applicable

Requires compliance with State and Federal Regulations for Transport of Hazardous Materials. Project Owner to report any concerns with the transport of hazardous materials. MVPP stipulates to this condition.

STAN-TRANS-4: Applicable

Requires project owner to consult with county and implement a traffic control plan. MVPP stipulates to preparing and implementing plan that meets county criteria.

STAN-TRANS-5: Applicable

Requires repairing roadways to original or new original condition as specified in the traffic control plan. MVPP stipulates to this standard condition.

DISPOSITION OF CATEGORICAL CONDITIONS

CAT-TRANS-1: Applicable

This condition is designed to ensure truck routes do not use residential areas. MVPP stipulates to this condition.

CAT-TRANS-2: Not Needed

This condition requires a scheduled construction hours to avoid peak traffic hours. This condition is not needed.

DISPOSITION OF UNIQUE CONDITIONS

UNI-TRANS-1: Not needed

Addresses the need to construct a safety plan to reduce the potential for damage from falling construction materials or equipment during cable-stringing activities. This requirement is not a concern for MVPP because there are no cable string activities.

UNI-TRANS-2: Not needed

Addresses the need to provide vehicular access to businesses and for emergency vehicle access. This condition is not need for MVPP.

UNI-TRANS-3:

Addresses requirements to comply with FAA Part 77 requirements. MVPP has already obtained FAA Part 77 requirements.

MVPC'S STIPULATED CONDITIONS OF CERTIFICATION

Pursuant to the above analysis, MVPC stipulates to the following conditions:

TRANS-1: Compliance with CalTrans Limits on Vehicle Size and Weight

The project owner shall comply with California Department of Transportation (CalTrans) and County limitation on vehicle sizes and weights. In addition, the project owner or its contractor shall obtain necessary transportation permits from CalTrans and all relevant jurisdictions for both rail and roadway use.

Verification:

In monthly compliance reports, the project owner shall submit copies of any oversize and overweight transportation permits received during that reporting period. In addition, the

project owner shall retain copies of these permits and supporting documentation in its compliance file for at least six months after the start of commercial operation.

TRANS-2: Compliance with CalTrans & County Limitations on Encroachment

The project owner or its contractor shall comply with CalTrans and County limitations for encroachment into public right-of-way and shall obtain necessary encroachment permits from CalTrans and all relevant jurisdictions.

Verification:

In monthly compliance reports, the project owner shall submit copies of any encroachment permits received during that reporting period. In addition, the project owners shall retain copies of these permits and supporting documentation in its compliance file for at least six months after the start of commercial operation.

TRANS-3: Compliance with State and Federal Regulations for Transport of Hazardous Materials

The project owner shall ensure that all federal and state regulations for the transport of hazardous materials are observed.

Verification:

The project owner shall include in its monthly compliance reports copies of all permits and licenses acquired by the project owner and/or subcontractors concerning the transport of hazardous substances.

TRANS-4: Construction Traffic Control Plan and Implementation Program

Prior to start of construction, the project owner shall consult with county and will prepare a construction traffic control plan and implementation program which includes addressing the timing of heavy equipment and building materials deliveries; signing, lighting and traffic control device placement for natural gas pipeline and transmission line construction; and establishing construction work hours outside of peak traffic periods.

Verification:

Thirty (30) days prior to construction, the project owner shall provide to the CPM and to San Bernardino County Public Works Department Plant for review and approval a copy of its construction traffic control plan and implementation program.

TRANS-5: Roadway Repairs

Based on the determined state of primary roadways to be used in the traffic control plan and implementation program and following construction of the power plant and all related facilities, the licensee shall repair those primary roadways to original or as near original condition as possible.

Verification:

Thirty days prior to construction, the licensee shall photograph the primary roadways. The licensee shall provide the CPM and San Bernardino County with a copy of these photographs. Within 30 days of the completion of project construction, the licensee will

meet with the CPM and San Bernardino County Public Works Department to determine and receive approval for the actions necessary and scheduled to complete the repair of those roadways to original condition as possible.

TRANS-6: Designated Route Requirements

Designated routes were necessary to ensure trucks did not go through residential areas, in front of schools, etc.

Verification:

The project owner shall include this specific route in its contracts for truck deliveries and maintain copies onsite for inspection by the CPM.

TRANS-7: Construction work Hours to Avoid Peak Traffic Hours

The Owner shall schedule construction work hours for project site that avoids morning (7 a.m. to 9 a.m.) and evening (4 p.m. to 6 p.m.) peak hour traffic periods (includes heavy truck traffic).

Verification:

The project owner shall maintain a delivery log, which specifies , in part, the time and date of each delivery in the on-site compliance file.

UNRESOLVED ISSUES IN TRAFFIC AND TRANSPORTATION

MVPC is not aware of any Traffic and Transportation issues requiring further exploration, analysis or mitigation. MVPC submits the above-stipulated conditions believing that the area of Traffic and Transportation will thus be fully addressed.

NOISE

This section presents a comprehensive analysis of Noise issues, both in previously permitted projects and in the case of the Mountainview Power Plant (MVPP)¹¹. Previously permitted projects are analyzed for their standard, categorical and unique conditions as well as what triggered each categorical and unique condition. Next, MVPP is juxtaposed with past projects allowing necessary conditions to be identified. The juxtaposition begins by a thorough review of applicable laws, ordinances, regulates and standards (LORS). Then, the setting of the MVPP in the context of noise management is presented. And, finally, Mountainview Power Company (MVPC) stipulates to conditions providing required mitigation and LORS compliance. The section closes by identifying any outstanding issues not resolved by the stipulated conditions.

OVERVIEW OF NOISE ISSUE AREA

The issue area of Noise involves assessing the potential noise impacts and LORS compliance issues associated with constructing and operating a power plant. Because noise is an important area that affects the public and workers, seven (7) standard conditions have been imposed upon all five previously permitted projects. There has been one (1) categorical condition also.

PAST NOISE CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-NOISE-1	Notification of Commencement of Project Construction	Yes
STAN-NOISE-2	Documentation of Noise Complaints	Yes
STAN-NOISE-3	Submittal of a Noise Control Program	Yes
STAN-NOISE-4	Steam Blow Process	Yes
STAN-NOISE-5	Public Notification of Steam Blow Activities	Yes
STAN-NOISE-6	25-Hour Community Noise Survey	Yes

¹¹ As in all the sections of this document, abbreviations are used for the last five permitted projects before the California Energy Commission. Those abbreviations are:
SPP = Sutter Power Plant
DEC = Delta Energy Center
LM = Los Medanos Energy Center
HD = High Desert
LP = La Paloma

STAN-NOISE-7	Occupational Noise Survey	Yes
CAT-NOISE-1	Construction Work Time Limits	Yes

STANDARD NOISE CONDITIONS

STAN-NOISE-1: Notification of Commencement of Project Construction

[LP-NOISE-1]; [SPP-NOISE-1]; [DEC-NOISE-1]; [LM-NOISE-1]; [HD-NOISE-1]

Standard condition language:

At least fifteen (15) days prior to the start of rough grading, the project owner shall notify all residents within one mile of the site, by “mail,” email or other effective means, of the commencement of project construction. At the same time, the project owner shall establish a telephone number for use by the public to report any undesirable noise conditions associated with the construction and operation of the project. If the telephone is not staffed 24 hours per day, the project owner shall include an automatic answering feature, with date and time stamp recording, to answer calls when the phone is unattended. This telephone number shall be posted at the project site during construction in a manner visible to passersby. This telephone number shall be maintained until the project has been operational for at least one year.

Protocol:

Condition has no protocol.

Verification:

The project owner shall transmit to the CPM in the first Month Construction Report following the start of rough grading a statement, signed by the project manager, attesting that the above notification has been performed, and describing the method of that notification. This statement shall also attest that the telephone number has been established and posted at the site.

STAN-NOISE-2: Documentation of Noise Complaints

[LP-NOISE-2]; [SPP-NOISE-2]; [DEC-NOISE-2]; [LM-NOISE-2]; [HD-NOISE-2]

Standard condition language:

Throughout the construction and operation of the project, the project owner shall document, investigate, evaluate, and attempt to resolve all project related noise complaints. The project owner shall:

1. Use the Noise Complaint Resolution Form or functionally equivalent procedure acceptable to the CPM, to document and respond to each noise complaint;
2. Attempt to contact the person(s) making the noise complaint within 24 hours;
3. Conduct an investigation to determine the source of noise related to the complaint;
4. If the noise is project related, take all reasonable measures to reduce the noise at its sources; and
5. Submit a report documenting the complaint and actions taken. The report shall include a complaint summary, including final results of noise reduction efforts; and if obtainable, a signed statement by the complainant stating that the noise problem is resolved to complainant's satisfaction.

Protocol:

Protocol for some conditions includes the list above.

Verification:

Within thirty (30) days of receiving a noise complaint, the project owner shall file a copy of the Noise Complaint Resolution Form, or similar instrument approved by the CPM, with the [appropriate] County Community Services Department and with the CPM documenting the resolution of the complaint. If mitigation is required to resolve a complaint, and the complaint is not resolved within a 30-day period, the project owner shall submit an updated Noise Complaint Resolution Form when the mitigation is finally implemented.

STAN-NOISE-3: Submittal of a Noise Control Program

[LP-NOISE-3]; [SPP-NOISE-3]; [DEC-NOISE-3]; [LM-NOISE-3]; [HD-NOISE-3]

Standard condition language:

Prior to the start of project construction, the project owner shall submit to the CPM for review a noise control program. The noise control program shall be used to reduce employee exposure to high noise levels during construction and also to comply with applicable OSHA standards.

Protocol:

Condition has no protocol.

Verification:

At least thirty (30) days prior to the start of rough grading, the project owner shall submit to the CPM the above referenced program. The project owner shall make the program available to OSHA upon request.

STAN-NOISE-4: Steam Blow Process

[LP-NOISE-4]; [SPP-NOISE-4]; [DEC-NOISE-4]; [LM-NOISE-4]; [HD-NOISE-4]

Standard condition language:

If a traditional, high-pressure steam blow process is employed, the project owner shall equip steam blow piping with a temporary silencer that quiets the noise of steam blows to no greater than 110 dBA measured at a distance of 100 feet. The project owner shall conduct steam blows only during the hours of 7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. weekends and holidays. If a modern low-pressure continuous steam blow process is employed, the project owner shall submit to the CPM a description of this process, with expected noise levels and projected hours of execution.

Protocol:

Condition has no protocol.

Verification:

At least fifteen (15) days prior to the first low-pressure continuous steam blow, the project owner shall submit to the CPM drawings or other information describing the process, including the noise levels expected and the expected time schedule for execution of the process.

STAN-NOISE-5: Public Notification of Steam Blow Activities

[LP-NOISE-5]; [SPP-NOISE-5]; [DEC-NOISE-5]; [LM-NOISE-5]; [HD-NOISE-5]

Standard condition language:

The project owner shall conduct a public notification program, which will alert residents within one mile of the site prior to the start of steam blow activities. The notification shall include a description of the purpose and nature of the steam blow(s), the proposed schedule, the expected sound levels and the explanation that it is a one-time operation and not a part of normal plant operation.

Protocol:

Condition has no protocol.

Verification:

At least fifteen (15) days prior to the first steam blow(s) the project owner shall notify all residents within one mile of the site of the planned steam blow activity, and shall make the notification available to other area residents in an appropriate manner. The notification may be in the form of letters to the area residences, telephone calls, fliers, or other effective means. Within five (5) days of notifying these entities, the project owner shall send a letter to the CPM confirming that they have been notified of the planned steam blow activities, including a description of the method(s) of that notification.

STAN-NOISE-6: 25-Hour Community Noise Survey

[LP-NOISE-6]; [SPP-NOISE-6]; [DEC-NOISE-6]; [LM-NOISE-6]; [HD-NOISE-6]

Standard condition language:

Upon first achieving an output of 80 percent or greater of rated capacity, the project owner shall conduct a 25-hour community noise survey, utilizing the same monitoring sites employed in the pre-project ambient noise survey as a minimum. The survey shall also include the octave band pressure levels to ensure that no new pure-tone noise components have been introduced. If the results from the survey indicate that operation of the power plant causes noise levels in excess of 45 dBA measured at the nearest resident, additional mitigation measures shall be implemented to reduce noise to a level of compliance with this limit. No single piece of equipment shall be allowed to stand out as a dominant source of noise.

Protocol:

Condition has no protocol.

Verification:

Within thirty (30) days after first achieving an output of 80% or greater of rated output, the project owner shall conduct the above described noise survey. Within thirty (30) days after completing the survey, the project owner shall submit a summary report of the survey to the [appropriate local governmental agency] and to the CPM. Included in the report will be a description of the above listed noise limits, and a schedule, subject to CPM approval, for implementing these measures. Within thirty (30) days of completion of installation of these measures, the project owner shall submit to the CPM a summary report of a new noise survey, performed as described above and showing compliance with this condition.

STAN-NOISE-7: Occupational Noise Survey

[LP-NOISE-7]; [SPP-NOISE-7]; [DEC-NOISE-7]; [LM-NOISE-7]; [HD-NOISE-7]

Standard condition language:

The project owner shall conduct an occupational noise survey to identify the noise hazardous areas in the facility. The survey shall be conducted within thirty (30) days after the facility is in full operation, and shall be conducted by a qualified person in accordance with the provisions of Title 8, California Code of Regulations, section 5095-5100 (Article 105) and Title 29, Code of Federal Regulations, Part 1910. The survey results shall be used to determine the magnitude of employee noise exposure. The project owner shall prepare a report of the survey results and, if necessary, identify proposed mitigation measures that will be employed to comply with the applicable California and federal regulations.

Protocol:

Condition has no protocol.

Verification:

Within thirty (30) days after completing the survey, the project manager shall submit the noise survey report to the CPM. The project owner shall make the report available to OSHA upon request.

CATEGORICAL NOISE CONDITIONS

One categorical condition in the issue area of noise was imposed dealing with construction work time limits. It is as follows:

CAT-NOISE-1: Construction Work Time Limits

[DEC-NOISE-8]; [LM-NOISE-8]

Description of categorical condition:

Noisy construction work (that which causes offsite annoyance) shall be restricted to the times of the day delineated below:

W/in the Pittsburg City Limits:	7 a.m. to 10 p.m.
W/in the Antioch City Limits:	7 a.m. to 7 p.m.
W/in the unincorporated areas of Contra Costa County:	7 a.m. to 7 p.m. weekdays and 8 a.m. to 5 p.m. weekends and holidays

Protocol:

Condition has no protocol.

Verification:

The project owner shall transmit to the CPM in the first Monthly Construction Report a statement acknowledging that the above restriction will be observed throughout the construction of the project.

MVPP'S NOISE ANALYSIS

INTRODUCTION

The construction and operation of any power plant creates noise, or unwanted sound. The character and loudness of this noise, the times of day or night during which it is

produced, and the proximity of the facility to any sensitive receptors combine to determine whether the facility will meet applicable noise control laws and ordinances, and whether it will exhibit significant adverse environmental impacts.

The purpose of this analysis is to identify and examine the likely noise impacts from the proposed MVPP and to propose procedures that will ensure the resulting noise impacts will comply with applicable laws and ordinances, and will be adequately mitigated.

MVPC hopes that this analysis will enable the Energy Commission to make findings that:

- the MVPP will likely be built and operated in compliance with all applicable noise laws, ordinances, regulations and standards (LORS); and
- the MVPP will present no significant adverse noise impacts, or none that have not been mitigated to the extent feasible.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Federal

Under the Occupational Safety and Health Act of 1970 (OSHA) (29 U.S.C. § 651 et seq.), the Department of Labor, Occupational Safety and Health Administration (OSHA) has adopted regulations (29 C.F.R. § 1910.95) designed to protect workers against the effects of occupational noise exposure. These regulations list permissible noise level exposure as a function of the amount of time during which the worker is exposed. The regulations further specify a hearing conservation program that involves monitoring the noise to which workers are exposed; assuring that workers are made aware of overexposure to noise; and periodically testing the workers' hearing to detect any degradation.

There are no federal laws governing offsite (community) noise.

State

Two state laws apply to the project that address occupational noise exposure and vehicle noise:

- The California Department of Industrial Relations, Division of Occupational Safety and Health enforces California Occupational Safety and Health Administration (Cal-OSHA) regulations that are the same as the federal OSHA regulations described above. These regulations are outlined in Title 8 California Code of Regulations (CCR) Section 5095 et. seq.
- Noise limits for highway vehicles are regulated under the California Vehicle Code. The limits are enforceable on the highways by the California Highway Patrol and the County Sheriff's Office. These regulations are outlined in Sections 23130 and 23130.5 of the California Vehicle Code.

Local

The plant site is located in a currently unincorporated section of San Bernardino County. However, it is surrounded by properties within the Cities of San Bernardino and Redlands. Therefore, the noise LORS of all three jurisdictions are discussed. The plant site will be annexed into the City of Redlands prior to final decision. In addition, pipeline construction will occur within the jurisdiction of other cities. Noise requirements related to construction are expected to be similar and will be complied with.

According to the San Bernardino County Development Code Section 87.0905, areas within San Bernardino County shall be designated as “noise-impacted” if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in Table 6.4-5 of MVPC’s AFC.

SETTING

The proposed facility will be located on an existing facility currently being annexed by the City of Redlands in San Bernardino County. The project site consists of a total of 64 acres located adjacent to the Santa Ana River. The existing facility consists of two steam boiler generating units that feed into an immediately adjacent Southern California Edison (SCE) transmission facility and substation. The two existing units utilize groundwater in cooling towers for cooling purposes and provide a nominal gross output of 66 MW each. The proposed new facility will utilize 18.7 already hardpacked or paved acres of the site, mostly to the North of the existing facility.

The area can be best described as an industrial region with other industrial areas and a mixture of residential and commercial zones nearby. To the North of the site lies the Santa Ana River, dry most of the year, which has numerous other industrial and commercial facilities along its side. Directly across the Santa Ana River is the former Norton Air Force Base, now the San Bernardino International Airport. It primarily serves as a commercial airport with large cargo planes flying in and out on a regular basis. The Santa Ana River itself has been highly disturbed, with reinforced or concrete channel banks, numerous surface mining operations going on to the North within the river bed.

To the East of the Site lies agricultural land and a water treatment facility. To the South lies agricultural land followed by the Highway -10 freeway. To the west lies commercial, light industrial and residential areas. The residential area is a small enclave to the Southwest of the facility.

IMPACTS

Linear Facilities

Construction of the gas and water pipelines in the local city streets will produce noise. Typical noise levels from equipment associated with pipeline construction activities are presented in Table 6.4-11 of MVPC’s AFC. The data detailed in that table indicates noise emissions from equipment associated with pipeline construction activities to be in the 87 dBA to 88 dBA range, at a distance of 50 feet. These noise levels will be

noticeable, and possibly annoying to persons outside their homes at those residences nearest to the construction. This work, however, is only a temporary phenomenon; no one residence should be exposed to impacts for more than a few days. In addition, such work is customarily performed during daytime, and would cause no impacts at night, when quiet is most important. Note that as discussed above, due to traffic concerns, limited pipeline construction may be required to occur at night when traffic is reduced. As required by local agencies special mitigation measures can be called into place to reduce potential construction noise impacts during non-exempt days or hours, such as the use of temporary noise reducing panels between the construction site and the impacted area, and the implementation of a noise complaint process. MVPC will work closely with the various local communities and residences to obtain guidance on timing of construction activities and mitigations needed to reduce noise exposure impacts to the shortest practicable time within industry accepted standards. Other mitigation measures to bring the construction noise level within local ordinances are discussed in Section 6.4.4 of the AFC.

The linear facilities, once placed in operation, will produce no audible noise. Therefore, there are no expected noise impacts related to the operation of the linear facilities.

Worker Effects

Compliance with California Occupational Safety and Health Association (Cal-OSHA) regulations will ensure that construction personnel are adequately protected from potential noise hazards. The noise exposure level to protect hearing of workers is regulated at 90 dBA over an 8-hour work shift. Areas above 85 dBA will be posted as high level noise areas and hearing protection will be required. MVPC will implement a hearing Conservation program for applicable employees as outlined in Cal-OSHA regulations.

Some locations in the plant are anticipated to produce hazardous noise levels. Operation of the power facility will comply with applicable LORS. Administrative procedures and hearing protection measures will be implemented to ensure adequate hearing protection of workers at the facility.

Operation Impacts

Sound associated with operation of the project will be produced by the four gas turbine inlets, casings, and outlets; the side walls and exhausts of the four heat recovery steam generators; the enclosures of the two steam turbines; the casings of the six electric generators; the side walls and coolers for the four main power transformers; the cooling towers; fuel-gas metering and control systems; and auxiliary motors, pumps, fans, compressors, and valves.

Project equipment will operate essentially continuously and produce a steady sound 24-hours per day and seven days per week. Occasional short-term noise level increases can occur during plant startup or shutdown, during load transitions, or during opening of steam relief valves for venting pressure. At other times, such as when, the plant is shut down for lack of dispatch or for maintenance, noise levels will decrease.

The residential exterior noise standards of the City of Redlands (General Plan 60: CNEL) and County of San Bernardino (Noise Ordinance: 49 dBA, i.e., lowest existing ambient) have been used to evaluate the potential operational noise impacts of the proposed power plant.

MITIGATION

Construction

The following noise mitigation measures are proposed for the construction phase of the project:

- Compliance with federal and local regulations on truck and construction equipment noise, and use appropriate mufflers on all engine-driven equipment; avoid equipment left idling for long periods.
- Protection of workers in areas that are above 85 dBA. This level dBA will be posted as high-level noise areas and hearing protection will be required. MVPC will implement a hearing conservation program for applicable employees as outlined in Cal-OSHA regulations.
- Implementation of special mitigation measures to reduce potential construction noise impacts to residential areas along the natural gas pipeline during non-exempt days or hours, such as the use of the temporary noise reducing panels between the construction site and the impacted area, and the implementation of a noise education and complaint process.
- Location of noisy equipment as far from noise sensitive boundaries as possible, or use noise reducing enclosures, temporary barriers or portable screens at these locations.
- Limitation of pile driving necessary for project construction to daytime hours and notification to the affected community in advance of any pile driving or blasting activities.
- Finalization and implementation of equipment noise mitigation measures in the detailed design phase of this project, in accordance with the recommendations presented in this document. These recommendations include, but are not limited to, a "GE turbine 85 dBA near field" standard mitigation package; additional noise mitigation measures (such as quieter equipment selection, sound walls and/or enclosures) for the feed-water pumps, transformers, compressor building, and steam turbine-generator units, as necessary.
- Project construction equipment and procedures will be specified in the construction contract's special provisions such that the average noise level (Leq) from construction equipment is limited to less than 83 dBA 50 feet from the noise source.
- All noise producing equipment and vehicles using internal combustion engines will be equipped with mufflers and air-inlet silencers, where appropriate, be in good operating condition, and meet or exceed original factory specifications. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) will be equipped with the shrouds and noise control features that are readily available for that type of equipment.

- All mobile or fixed noise-producing equipment used on the project, which is regulated for noise output by a local state, or federal agency, will comply with such regulations while conducting project-related activities.
- Material stockpiles and mobile equipment staging, parking, and maintenance areas will be located as far as practical from noise-sensitive receptors.
- The hours of construction and startup, including noise producing maintenance activities, and all spoils and material transport, will be restricted to the times and days permitted by the local noise or other applicable ordinances except for certain pipe laying activities and some start up activities. Noise-producing project activity will comply with local noise control regulations affecting construction activity or obtain exemptions therefrom.
- The use of noise-producing signals, including horns, whistles, alarms, and bells, will be for safety warning purposes only.
- No project-related public address loudspeaker, two-way radio, or music system will be audible at any adjacent noise-sensitive receptor.
- The onsite construction supervisor will have the responsibility and authority to receive and resolve noise complaints.

Even with all of the above mitigation measures in place, there may be short-term construction noise levels above the 55 dBA limits to the nearest resident. MVPC will work with the cities of San Bernardino and Redlands and local residences to reduce noise impact to its lowest limit and shortest duration.

Operation

The following is a list of major noise generating equipment proposed for the project and potential mitigation measures that may be used, if required, to reduce noise impacts.

- Gas Turbine-Generators - Gas turbine-generator noise is radiated from the air inlet, exhaust, and casing. Casing-radiated noise, along with noise from ancillary equipment, will be contained by enclosing them in acoustical structures. Air inlet noise can be reduced by a parallel-baffle muffler in the inlet ductwork to each unit and additional attenuation can be provided by an acoustically lined inlet duct or lined inlet plenum. Gas turbine exhaust noise can be contained in the ductwork by thermal/acoustical lagging and/or enclosures and it can also be reduced as it travels through the exhaust flow path by a muffler, which is typically in the ductwork between the turbine and the stack or within the stack. These measures will be incorporated, if needed, to meet noise limitations. The sound produced by the gas turbine exhausts will be attenuated by the heat recovery steam generators. In addition, high-efficiency parallel-baffle mufflers will be employed to further attenuate the exhaust sound.
- Steam Turbine-Generators-Steam turbine-generator noise is radiated from the casing as the steam passes through the condenser. Casing-radiated noise, along with noise from ancillary equipment, can be contained, if required, by enclosing them in acoustical enclosures and/or by acoustical blankets.
- Transformers - Noise from the main transformers can be addressed by purchasing high-efficiency reduced-noise transformers and by installing acoustical barrier walls or partial enclosures around the transformers, if required. High-efficiency

transformers are designed to have lower internal magnetic flux densities and lower magneto-restrictive forces, hence, lower overall noise emissions than "standard" transformers. In addition, sound barrier walls will be provided, as necessary, to further attenuate the transformer side-walls and cooler sound.

- Coolers- Fans on the coolers produce noise that depends on their blade design and operating conditions. Noise mitigation, if required, can be achieved by specifying units with reduced-speed, low-noise fans, locating the units to take advantage of shielding provided by other structures, and installing barrier walls near the units. In addition, inlet and exhaust mufflers, as necessary, can be installed to attenuate sound radiation.
- Fuel-Gas Metering and Control Systems - These systems will be specified for low-noise emissions or enclosed or shielded, as necessary.
- Equipment and Building Ventilation Systems - Equipment (e.g., gas turbine compartment) and building ventilation systems typically include in-line or rooftop exhaust fans and fresh air inlet openings. The noise of these systems can be addressed, if required, by purchasing quieted units with lower-speed reduced noise-fans, installing mufflers or acoustical lining in the air paths, locating the units to take advantage of shielding provided by other structures, and installing barrier walls near the units.
- Miscellaneous Equipment- The balance of the facility's equipment (e.g., motors, pumps, air compressors, and fuel gas flow valves, regulators, and heaters) can be purchased with specified noise limits, and be installed inside the facility buildings, or in smaller, acoustically-designed enclosures or by lagging, if required.

As with construction, the above equipment specific noise mitigation measures will be augmented with a worker safety protection plan as required by Cal-OSHA.

FACILITY CLOSURE

Upon closure of the facility, all operational noise will cease; no further adverse impacts from operation will be possible. The remaining potential noise source will be that caused by dismantling of the structures and equipment, and any site restoration work that may be performed. Since this noise will be similar to that caused by the original construction of the MVPP, it can be treated similarly. That is, noisy work can be performed during daytime hours, with machinery and equipment properly equipped with mufflers. Any noise LORS then in existence would apply; applicable Conditions of Certification would also apply unless properly modified.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions:

MVPC is confident that CEC staff will conclude that the MVPP will likely be built and operated to comply with all applicable noise laws, ordinances, regulations and standards. Furthermore, MVPC believes that with the implementation of the mitigation measures previously described, no significant adverse noise impacts are likely to occur. The MVPP

will likely represent an unobtrusive, nearly undetectable component of ambient noise levels.

MVPP'S CONDITIONS ANALYSIS

Below, MVPC considers all past conditions for possible application to MVPP.

DISPOSITION OF STANDARD CONDITIONS

STAN-NOISE-1: Applicable

Requires that notification of commencement of project construction fall within the required timeframe. In the project owners monthly report they will attest that all notifications have been executed. MVPC agrees that this condition is needed to begin the project and stipulates to this condition.

STAN-NOISE-2: Application

Requires that all measures will be taken, (document, investigate, etc) to resolve project related noise. MVPC stipulates to this condition.

STAN-NOISE-3: Applicable

Requires prior to construction the project owner will submit for review a noise control program and have readily available upon the request of Cal-OSHA. MVPC agrees to the noise control program and stipulate to this condition.

STAN-NOISE-4: Applicable

Requires a traditional high-pressure steam blow process be employed. This requires the project owner to conduct steam blows during approved operating hours and submit description of this process with expected noise levels and projected hours of execution. MVPC agrees that this process be employed.

STAN-NOISE-5: Applicable

Requires public notification of steam blow activities. MVPC agrees with the need for this condition and so stipulates.

STAN-NOISE-6: Applicable

Requires project owner to conduct a 25-hour community noise survey, utilizing the same monitoring site employed in the pre-project ambient noise survey as a minimum. MVPC agrees to the needed survey and stipulates to this condition.

STAN-NOISE-7: Applicable

Requires the project owner to conduct within thirty days after the facility is in full operation an occupational noise survey to be conducted by a qualified person in accordance to regulation. MVPC agree with this and stipulates to this condition.

DISPOSITION OF CATEGORICAL CONDITIONS

CAT-NOISE-1: Applicable (with modifications)

This condition sets construction time limits to ensure no offsite annoyance in residential areas during non-exempt time periods. MVPC agrees with the need to ensure such annoyance from noise is eliminated. Below, MVPC stipulates to NOISE-8, designed to ensure no unmitigated significant noise impact.

NEW NEEDED CONDITIONS

NOISE-8 is a new condition, similar to CAT-NOISE-1, designed to mitigate offsite noise impacts to residential areas.

MVPC'S STIPULATED CONDITIONS OF CERTIFICATION

MVPC stipulates to the following conditions:

NOISE-1: Notification of Commencement of Project Construction

At least fifteen (15) days prior to the start of rough grading, the project owner shall notify all residents within one mile of the site, by email or other effective means, of the commencement of project construction. At the same time, the project owner shall establish a telephone number for use by the public to report any undesirable noise conditions associated with the construction and operation of the project. If the telephone is not staffed 24 hours per day, the project owner shall include an automatic answering feature, with date and time stamp recording, to answer calls when the phone is unattended. This telephone number shall be posted at the project site during construction in a manner visible to passersby. This telephone number shall be maintained until the project has been operational for at least one year.

Verification:

The project owner shall transmit to the CPM in the first Month Construction Report following the start of rough grading a statement, signed by the project manager, attesting that the above notification has been performed, and describing the method of that notification. This statement shall also attest that the telephone number has been established and posted at the site.

NOISE-2: Documentation of Noise Complaints

Throughout the construction and operation of the project, the project owner shall document, investigate, evaluate, and attempt to resolve all project related noise complaints. The project owner shall:

- Use the Noise Complaint Resolution Form or functionally equivalent procedure acceptable to the CPM, to document and respond to each noise complaint;
- Attempt to contact the person(s) making the noise complaint within 24 hours;
- Conduct an investigation to determine the source of noise related to the complaint;
- If the noise is project related, take all reasonable measures to reduce the noise at its sources; and

- Submit a report documenting the complaint and actions taken. The report shall include a complaint summary, including final results of noise reduction efforts; and if obtainable, a signed statement by the complainant stating that the noise problem is resolved to complainant's satisfaction.

Verification:

Within thirty (30) days of receiving a noise complaint, the project owner shall file a copy of the Noise Complaint Resolution Form, or similar instrument approved by the CPM, with the San Bernardino County Community Services Department or Cities of Redlands, Colton, Rialto, Rancho Cucamonga, San Bernardino, or Fontana, as appropriate, and with the CPM documenting the resolution of the complaint. If mitigation is required to resolve a complaint, and the complaint is not resolved within a 30-day period, the project owner shall submit an updated Noise Complaint Resolution Form when the mitigation is finally implemented.

NOISE-3: Submittal of a Noise Control Program

Prior to the start of project construction, the project owner shall submit to the CPM for review a noise control program. The noise control program shall be used to reduce employee exposure to high noise levels during construction and also to comply with applicable OSHA standards.

Verification:

At least 30 days prior to the start of rough grading, the project owner shall submit to the CPM the above referenced program. The project owner shall make the program available to OSHA upon request.

NOISE-4: Steam Blow Process

If a traditional, high-pressure steam blow process is employed, the project owner shall equip steam blow piping with a temporary silencer that quiets the noise of steam blows to no greater than 110 dBA measured at a distance of 100 feet. The project owner shall conduct steam blows only during the hours of 7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. weekends and holidays. If a modern low-pressure continuous steam blow process is employed, the project owner shall submit to the CPM a description of this process, with expected noise levels and projected hours of execution.

Verification:

At least fifteen (15) days prior to the first low-pressure continuous steam blow, the project owner shall submit to the CPM drawings or other information describing the process, including the noise levels expected and the expected time schedule for execution of the process.

NOISE-5: Public Notification of Steam Blow Activities

The project owner shall conduct a public notification program, which will alert residents within one mile of the site prior to the start of steam blow activities. The notification shall include a description of the purpose and nature of the steam blow(s), the proposed

schedule, the expected sound levels and the explanation that it is a one-time operation and not a part of normal plant operation.

Verification:

At least fifteen (15) days prior to the first steam blow(s) the project owner shall notify all residents within one mile of the site of the planned steam blow activity, and shall make the notification available to other area residents in an appropriate manner. The notification may be in the form of letters to the area residences, telephone calls, fliers, or other effective means. Within five (5) days of notifying these entities, the project owner shall send a letter to the CPM confirming that they have been notified of the planned steam blow activities, including a description of the method(s) of that notification.

NOISE-6: 25-Hour Community Noise Survey

Upon first achieving an output of 80 percent or greater of rated capacity, the project owner shall conduct a 25-hour community noise survey, utilizing the same monitoring sites employed in the pre-project ambient noise survey as a minimum. The survey shall also include the octave band pressure levels to ensure that no new pure-tone noise components have been introduced. If the results from the survey indicate that operation of the power plant causes noise levels in excess of 45 dBA measured at the nearest resident, additional mitigation measures shall be implemented to reduce noise to a level of compliance with this limit. No single piece of equipment shall be allowed to stand out as a dominant source of noise.

Verification:

Within thirty (30) days after first achieving an output of 80% or greater of rated output, the project owner shall conduct the above described noise survey. Within thirty (30) days after completing the survey, the project owner shall submit a summary report of the survey to the [appropriate local governmental agency] and to the CPM. Included in the report will be a description of the above listed noise limits, and a schedule, subject to CPM approval, for implementing these measures. Within thirty (30) days of completion of installation of these measures, the project owner shall submit to the CPM a summary report of a new noise survey, performed as described above and showing compliance with this condition.

NOISE-7: Occupational Noise Survey

The project owner shall conduct an occupational noise survey to identify the noise hazardous areas in the facility. The survey shall be conducted within thirty (30) days after the facility is in full operation, and shall be conducted by a qualified person in accordance with the provisions of Title 8, California Code of Regulations, section 5095-5100 (Article 105) and Title 29, Code of Federal Regulations, Part 1910. The survey results shall be used to determine the magnitude of employee noise exposure. The project owner shall prepare a report of the survey results and, if necessary, identify proposed mitigation measures that will be employed to comply with the applicable California and federal regulations.

Verification:

Within thirty (30) days after completing the survey, the project manager shall submit the noise survey report to the CPM. The project owner shall make the report available to OSHA upon request.

NOISE-8: Avoid Unnecessary Residential Annoyance

The project owner shall ensure that noise levels during non-exempt hours in residential areas near project site and along natural gas pipeline route are minimized and mitigated by:

- Identifying residential regions along pipeline route and scheduling noisy construction work during exempt hours in such areas whenever possible;
- Coordinate with appropriate City or County personnel when construction activities are required during non-exempt hours in residential areas due to traffic or logistical impact reasons to ensure such construction is minimized and mitigated;
- Mitigate such construction by using sound panels and other means as agreed upon with local authorities; and
- Attend to and resolve noise complaints as outlined in condition of certification NOISE-2.

Verification:

At least thirty (30) days prior to commencing construction in a particular City or in the County, project owner shall submit a report to the CPM indicating that project owner has met with that City or the County regarding an anticipated non-exempt residential construction likely to cause annoyances.

UNRESOLVED ISSUES IN NOISE

MVPC is not aware of any noise issues that would require further exploration, analysis or mitigation. To that end, MVPC submits the above-stipulated conditions believing that the issue area of noise will be fully addressed.

VISUAL RESOURCES

This section presents a comprehensive analysis of Visual issues, both in previously permitted projects and in the case of the Mountainview Power Plant (MVPP)¹². Previously permitted projects are analyzed for their standard, categorical and unique conditions as well as what triggered each categorical and unique condition. Next, MVPP is juxtaposed with past projects allowing necessary conditions to be identified. The juxtaposition begins by a thorough review of applicable laws, ordinances, regulates and standards (LORS). Then, the setting of the MVPP in the context of visual is presented. And, finally, Mountainview Power Company (MVPC) stipulates to conditions providing required mitigation and LORS compliance. The section closes by identifying any outstanding issues not resolved by the stipulated conditions.

OVERVIEW OF VISUAL RESOURCES ISSUE AREA

The issue area of Visual Resources has four (4) standard, one (1) categorical, and nine (9) unique conditions, which are listed below. Visual Resources analysis involves assessing impacts associated with constructing and operating a power plant as well as compliance with visual resources related LORS. Four standard conditions were imposed upon all five previously permitted projects.

PAST VISUAL RESOURCES CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-VIS-1	Non-Reflective Colors	Yes
STAN-VIS-2	Non-Reflective Fencing	Yes
STAN-VIS-3	Lighting Plan	Yes
STAN-VIS-4	Screening, Landscaping and Other Related Plans	Yes
CAT-VIS-1	Placement of Electrical Transmission Poles	No
UNI-SPP-VIS-1	Matching Facilities	No
UNI-SPP-VIS-2	Lighting Modification	No

¹² As in all the sections of this document, abbreviations are used for the last five permitted projects before the California Energy Commission. Those abbreviations are:

SPP = Sutter Power Plant
DEC = Delta Energy Center
LM = Los Medanos Energy Center
HD = High Desert
LP = La Paloma

UNI-SPP-VIS-3	Restoration of Disturbed Areas During Construction	No
UNI-DEC-VIS-4	Installation of Temporary Aesthetic Screening	No
UNI-DEC-VIS-5	Installation of Aesthetic Screening	No
UNI-DEC-VIS-6	Aesthetic Enhancement Plan	No
UNI-LM-VIS-7	Sound Wall Construction	No
UNI-LM-VIS-8	Landscape Restoration	No
UNI-LM-VIS-9	Transmission Pole Height	No

STANDARD VISUAL CONDITIONS

STAN-VIS-1: Non-Reflective Colors

[LM-VIS-1]; [SPP-VIS-1]; [LP-VIS-1]; [DEC-VIS-1]; [HD-VIS-1]

Description of condition:

Prior to the first electricity generation, the project owner shall treat the project structures, buildings, and tanks visible to the public in non-reflective colors to blend with the agricultural setting.

Protocol:

The project owner shall submit a treatment plan for the project to the CPM for review and approval. The treatment plan shall include:

1. Specification, and 11"x17" color simulations of the treatment proposed for use on project structures, including structures treated during manufacture;
2. A detailed schedule for completion of the treatment; and
3. A procedure to ensure proper treatment maintenance for the life of the project.

If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall submit to the CPM a revised plan. After approval of the plan by the CPM, the project owner shall implement the plan according to the schedule and shall ensure that the treatment is properly maintained for the life of the project. For any structures that are treated during manufacture, the project owner shall not specify the treatment of such structures to the vendors until the project owner receives notification of approval of the treatment plan by the CPM. The project owner shall not perform the final treatment on any structures until the project owner receives notification of approval of the treatment plan from the CPM. The project owner shall notify the CPM within one week after all pre-colored structures have been erected and all structures to be treated in the field have been treated and the structures are ready for inspection.

Verification:

Not later than 60 days prior to ordering any structures that are to be color treated during manufacture, the project owner shall submit its proposed plan to the CPM for review and approval.

If the CPM notifies the project owner that any revisions of the plan are needed before the CPM will approve the plan, within 30 days of receiving that notification, the project owner shall submit to the CPM a revised plan.

Not less than thirty days prior to first electricity generation, the project owner shall notify the CPM that all structures treated during manufacture and all structures treated in the field are ready for inspection. The project owner shall provide a status report regarding treatment maintenance in the Annual Compliance Report.

STAN-VIS-2: Non-Reflective Fencing

[LM-VIS-2]; [SPP-VIS-2]; [LP-VIS-2]; [DEC-VIS-2]; [HD-VIS-2]

Description of condition:

Any fencing for the project shall be non-reflective.

Protocol:

At least 30 days prior to ordering the fencing the project owner shall submit to the CPM for review and approval the specifications for the fencing documenting that such fencing will be non-reflective. If the CPM notifies the project owner that revisions of the specifications are needed before the CPM will approve the submittal, the project owner shall submit to the CPM revised specifications.

The project owner shall not order the fencing until the project owner receives approval of the fencing submittal from the CPM.

The project owner shall notify the CPM within one week after the fencing has been installed and is ready for inspection.

Verification:

At least 60 days prior to ordering the non-reflective fencing, the project owner shall submit the specifications to the CPM for review and approval.

If the CPM notifies the project owner that revisions of the submittal are needed before the CPM will approve the submittal, within 30 days of receiving that notification, the project owner shall prepare and submit to the CPM a revised submittal.

The project owner shall notify the CPM within seven days after completing installation of the fencing that the fencing is ready for inspection.

STAN-VIS-3: Lighting Plan

[LM-VIS-4]; [SPP-VIS-3]; [LP-VIS-3]; [DEC-VIS-3]; [HD-VIS-3]

Description of condition:

Project Owner shall design and install all lighting, so it's not visible from public viewing areas and illumination of the vicinity and the nighttime sky is minimized.

Protocol: The project owner shall develop and submit a lighting plan for the project to the CPM and the Sutter County Community Services Department for review and approval. The lighting plan shall require that:

- Lighting is designed so that exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of this outdoor lighting shall be such that the luminescence or light source is shielded to prevent light trespass outside the project boundary;

- High illumination areas not occupied on a continuous basis such as maintenance platforms or the main entrance are provided with switches or motion detectors to light the area only when occupied;
- A lighting complaint resolution form (similar in general format to that in Visual Attachment 1, which follows these Conditions) will be used by plant operations, to record all lighting complaints received and document the resolution of those complaints. All records of lighting complaints shall be kept in the on-site compliance file. If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall prepare and submit to the CPM a revised plan. Lighting shall not be installed before the plan is approved. The project owner shall notify the CPM when the lighting has been installed and is ready for inspection.

Verification:

At least 60 days before ordering the exterior lighting, the project owner shall provide the lighting plan to the CPM and to the Sutter County Community Services Department for review and approval.

If the CPM notifies the project owner that any revisions of the plan are needed before the CPM will approve the plan, within 30 days of receiving that notification the project owner shall submit to the CPM a revised plan.

The project owner shall notify the CPM within seven days of completing exterior lighting installation that the lighting is ready for inspection.

STAN-VIS-4: Screening, Landscaping, and Other Related Plans

[LM-VIS-5]; [SPP-VIS-4]; [LP-VIS-4]; [DEC-VIS-4]

Description of condition:

By December 1 of the year in which ground disturbance related to construction of the power plant begins, the project owner shall implement a landscape plan that meets the requirements of the Sutter County Zoning Code and provides a continuous screen of the proposed power plant from sensitive view areas. The screen shall be created along the northern and southern boundaries of the Calpine property and along the eastern boundary of the Calpine property parallel to South Township Road.

Protocol:

The project owner shall submit to the CEC CPM for review and approval a specific plan describing its landscaping proposal, stating that it conforms to Sutter County's Zoning Code and has been approved by the County. The plan shall include, but not be limited to:

- A detailed landscape plan, at a reasonable scale, which includes a list of proposed tree and shrub species and sizes and a discussion of the suitability of the plants for the site conditions and mitigation objectives.

One objective shall be to provide year-round screening. To meet this objective evergreen species shall be used. This may require a berm to raise the tree roots above the water table. Another objective shall be to provide screening at least 75 feet tall for the total distance to be screened, except where clearance beneath the proposed transmission line requires shorter trees. Another objective shall be to use species that grow rapidly. The plan shall propose species and spacing to achieve these objectives. Trees to be planted shall be the optimal size to reach full height as rapidly as possible.

- Maintenance procedures, including any needed irrigation; and
- A procedure for replacing unsuccessful plantings.

If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall prepare and submit to the CPM a revised plan. The trees and shrubs shall not be planted before the plan is approved. The project owner shall notify the CPM when the trees and shrubs have been planted and are ready for inspection.

Verification:

At least 90 days prior to the start of commercial operation of the project, the project owner shall submit the proposed landscape plan for the project to the CPM for review and approval. The CPM will respond to the project owner within 15 days of receipt of the landscaping plan. The project owner shall submit any required revisions within 30 days of notification by the CPM. The CPM will respond to the project owner within 15 days of receipt of the revised documents. The project owner shall notify the CPM within seven days after completing the proposed planting that the planting is ready for inspection.

CATEGORICAL VISUAL CONDITIONS

CAT-VIS-1: Placement of Electrical Transmission Poles
[SPP-VIS-7]; [LM-VIS-8 and 9]; [HD-VIS-4 and 5]

Triggering circumstance:

The project's electrical transmission poles potentially significantly impacted views of residences.

Description of categorical condition:

Project Owner shall place all electrical transmission poles so as to not be in direct view of any residence. To minimize potential visual impacts, the project owner shall place all electrical transmission poles so as to not be directly in front of any residence and, to the extent possible, so as to not be directly in the view of the Sutter Buttes from any residence.

Protocol:

At least 60 days prior to construction of the transmission line, the project owner shall submit a plan to the CPM showing:

- All proposed pole locations;
- All residences within one-quarter mile of the proposed transmission line route that have a view of the transmission line; and,
- The line of sight from each of the residences toward the Sutter Buttes.

If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall prepare and submit to the CPM a revised plan. Transmission line pole placement shall not begin before the plan is approved. The project owner shall notify the CPM when the poles have been installed and are ready for inspection.

Verification:

At least 60 days prior to beginning transmission line construction; the project owner shall provide the electrical transmission pole plan to the CPM for review and approval.

UNIQUE VISUAL CONDITIONS

UNI-SPP-VIS-1: Matching Facilities

[SPP-VIS-5]

Triggering situation:

Cumulative visual impacts required SPP to match facilities color to background.

Description of unique condition:

Prior to first electricity generation at the Sutter Power Project, to reduce the contribution of the Sutter Power Project to cumulative visual impacts, the project owner shall have the Greenleaf 1 facilities painted to match the colors of the Sutter Power Project.

Protocol:

The project owner shall submit a treatment plan for the project to the California Energy Commission Compliance Project Manager (CPM) for review and approval. The treatment plan shall include:

- Specification and 11" x 17" color simulations, of the treatment proposed for use on project structures.
- A detailed schedule for completion of the treatment; and,
- A procedure to ensure proper treatment maintenance for the life of the project.

If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall submit to the CPM a revised plan.

After approval of the plan by the CPM, the project owner shall implement the plan according to the schedule and shall ensure that the treatment is properly maintained for the life of the project. The project owner shall not perform the final treatment on any structures until the project owner receives notification of approval of the treatment plan from the CPM. The project owner shall notify the CPM within one week after all structures have been treated and the structures are ready for inspection.

Verification:

At least 60 days prior to first commercial electricity generation at the Sutter Power Project, the project owner shall submit its proposed plan to the CPM for review and approval. If the CPM notifies the project owner that any revisions of the plan are needed before the CPM will approve the plan, within 30 days of receiving that notification, the project owner shall submit to the CPM a revised plan. The project owner shall notify the CPM when all structures have been treated and are ready for inspection. The project owner shall provide a status report regarding treatment maintenance in the Annual Compliance Report.

UNI-VIS-2: Lighting Modification

[SPP-VIS-6]

Triggering situation:

Cumulative lighting impacts of new projects required SPP to modify existing lighting to offset lighting impacts.

Description of unique condition:

Prior to first electricity generation, to offset the contribution of the Sutter Power Project to cumulative lighting impacts, the project owner shall have the lighting at the Greenleaf 1 Power Plant modified such that light bulbs and reflectors are not visible from public viewing areas and illumination of the vicinity and the nighttime sky is minimized. To meet these requirements:

Protocol:

The project owner shall develop and submit a lighting modification plan for the project to the CPM for review and approval. The lighting plan shall require that:

- Exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and backscatter to the nighttime sky is minimized. The luminescence or light source shall be shielded to prevent light trespass outside the project boundary;
- High illumination areas not occupied on a continuous basis such as maintenance platforms or the main entrance shall be provided with switches or motion detectors to light the area only when occupied;
- A lighting complaint resolution form (following the general format of that in attachment 1) will be used by plant operations, to record all lighting complaints received and document the resolution of those complaints. All records of lighting complaints shall be kept in the on-site compliance file. If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall prepare and submit to the CPM a revised plan. Lighting modifications shall not be made before the plan is approved. The project owner shall notify the CPM when the lighting modifications have been made and are ready for inspection.

Verification:

At least 60 days prior to first electricity generation on the Sutter Power Project the project owner shall provide the lighting modification plan to the CPM for review and approval. If the CPM notifies the project owner that any revisions of the plan are needed before the CPM will approve the plan, within 30 days of receiving that notification the project owner shall submit to the CPM a revised plan. The project owner shall notify the CPM within seven days after completing exterior lighting modifications that the lighting is ready for inspection.

UNI-VIS-3: Restoration of Disturbed Areas During Construction

[DEC-VIS-6]

Triggering situation:

Underground utilities potentially impacted existing vegetation as a visual resource

Description of unique condition:

The project owner shall restore any and all areas that are disturbed during the construction or operation of any portions of the proposed underground utilities.

Protocol:

The project owner shall submit a plan for restoring the surface conditions of any rights-of-way disturbed during construction of underground utilities. The plan shall include grading to the original grade and contour and revegetation of the rights-of-way. For rights-of-way located in the City of Antioch, the submittal shall include evidence from the City of Antioch that the plan conforms to the requirements of Community Design Policy 2 in the City of Antioch General Plan. For rights-of-way located in the City of Pittsburg or elsewhere, the submittal shall include similar detail and information for restoration of surface conditions. If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the submittal, the project owner shall submit to the CPM a revised plan. The project owner shall not implement the plan until the project owner receives approval of the submittal from the CPM. The project owner shall notify the CPM within one week after the grading and revegetation has been installed and is ready for inspection.

Verification:

At least 30 days prior to beginning implementation of the surface restoration, the project owner shall submit the plan to the CPM for review and approval and to the cities of Pittsburg and Antioch for review and comment. If the CPM notifies the project owner that revisions of the submittal are needed before the CPM will approve the submittal, within 30 days of receiving that notification, the project owner shall prepare and submit to the CPM a revised submittal. The project owner shall notify the CPM within seven days after completing the surface restoration that it is ready for inspection.

UNI-DEC-VIS-4: Installation of Temporary Aesthetic Screening

[DEC-VIS-7]

Triggering situation:

Construction environment would have adversely impacted visual resources of area.

Description of unique condition:

Project Owner shall implement the installation of temporary aesthetic screening along the south and west portions of the perimeter of the construction laydown area. Immediately before beginning use of the 10-acre construction laydown area for the power plant, the project owner shall implement the installation of temporary aesthetic screening along the south and west portions of the perimeter of the construction laydown area. The aesthetic screening shall remain in place for the duration of the use of the area. Screening shall be high enough to obscure views of most of the lighting, as well as equipment, vehicles, and materials in the area, from the highway and apartment complex to the south. Upon completion of construction of the project, the aesthetic screening shall be removed and the construction laydown area shall be revegetated and coordinated with the City of Pittsburg's plans for the proposed retention basin primarily using plants native to the local region. The goal of the revegetation shall be to maintain the open space character of the site and area.

Protocol:

The project owner shall submit to the CPM for review and approval a specific plan describing its temporary aesthetic screening plan, providing evidence that the City of Pittsburg has been consulted regarding the plan, and attaching any recommendations from the City of Pittsburg. The plan shall include, but not be limited to:

- a detailed plan, at a reasonable scale, which identifies the type, character, colors, and other detailed information for the proposed temporary screening.
- elevations of the views of the temporary aesthetic screening showing how the objectives of the screening will be accomplished.
- any maintenance procedures; and
- a procedure and plan for removing the temporary aesthetic screening.

If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall prepare and submit to the CPM a revised plan. The temporary aesthetic screening and any other plan features shall not be installed before the plans are approved. The project owner shall notify the CPM, and the City of Pittsburg when the plans have been implemented and are ready for inspection.

Verification:

At least 60 days prior to the start of use of the construction laydown area for the power plant, the project owner shall submit the proposed temporary aesthetic screening plan to

the CPM for review and approval. The project owner shall also submit the proposed aesthetic screening plan to the City of Pittsburgh for review and comment. The project owner shall submit any required revisions within 30 days of notification by the CPM. The project owner shall notify the CPM and the City of Pittsburgh within seven days after implementing the proposed plan that the temporary aesthetic screening installation is ready for inspection.

UNI-DEC-VIS-5: Installation of Aesthetic Screening

[DEC-VIS-8]

Triggering situation:

View of new facility would have adversely impacted visual resources as seen from highway and residences.

Description of unique condition:

Immediately following completion of construction of the power plant, the project owner shall implement the installation of aesthetic screening along the south and west edges of the power plant site that will partially screen views of lower portion of the facility from the Pittsburgh-Antioch Highway and nearby residences.

Immediately following completion of construction of the power plant, the project owner shall implement the installation of aesthetic screening along the south and west edges of the power plant site that will partially screen views of the lower portion of the facility from the Pittsburgh-Antioch Highway and nearby residences. Screening may consist of a combination of plants, aesthetic berms, and walls or fencing. Vegetation selected for landscape screening shall consist primarily of plants that are native to the local region. Screening vegetation shall consist of trees and shrubs in groupings designed to form a varied visual edge. Planting of screening vegetation shall be initiated as soon as possible during facility construction and shall achieve a minimum of 50% screening of the lower 40 feet of the facility within 10 years of the startup of operation of the facility. The goal of the screening should be to maintain the open space character of the remaining area, reduce impacts of new sources of lighting, and partially screen the lower portion of the power plant to help blend it with its surroundings and soften the visual impacts of the project.

Protocol:

The project owner shall submit to the CPM for review and approval a specific plan describing its aesthetic screening plan, providing evidence that the City of Pittsburgh has been consulted regarding the plan, and attaching any recommendations from the City of Pittsburgh. The plan shall include, but not be limited to:

- a detailed landscape and grading plan, at a reasonable scale, which includes a list of proposed tree and shrub species and sizes and a discussion of the suitability of the plants for the site conditions and mitigation objectives.
- elevations of the views of the aesthetic screening projected for 5 years and 10 years from the time of startup of operation of the facility that show how the planting will achieve the required screening objective of 50% screening of the lower 40 feet of the facility within 10 years of the startup of the facility.
- maintenance procedures, including any needed irrigation; and,
- a procedure for replacing unsuccessful plantings.

If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall prepare and submit to the CPM a revised plan.

The landscaping and any other plan features shall not be installed before the plan is approved. The project owner shall notify the CPM and the City of Pittsburgh when the plan has been implemented and is ready for inspection

Verification:

At least 90 days prior to the first turbine roll of the power plant, the project owner shall submit the proposed aesthetic screening plan to the CPM for review and approval. The project owner shall also submit the proposed aesthetic screening plan to the City of Pittsburgh for review and comment. The project owner shall submit any required revisions within 30 days of notification by the CPM. The project owner shall notify the CPM and the City of Pittsburgh within seven days after implementing the proposed plan that the aesthetic screening installation is ready for inspection.

UNI-DEC-VIS-6: Aesthetic Enhancement Plan

[DEC-VIS-9]

Triggering situation:

An existing view corridor to the water would have been adversely impacted by the project.

Description of unique condition:

To maintain and enhance the existing view corridor across Dowest Slough to the water from the Pittsburgh-Antioch Highway and the Casa Medanos residential complex, the project owner shall prepare and implement an aesthetic enhancement plan for the Dowest Slough area. Prior to completion of construction of Dow s proposed retention basin, the project owner shall submit to the CPM for review and approval, and to Dow Chemical and the City of Pittsburgh Community Development Department for review and comment, an aesthetic enhancement plan as described in the Protocol section of this condition. (Protocol 1-6).

In addition, once sufficient Dow retention basin design information is available, if Dow Chemical and the project owner agree that construction of the retention basin will not conflict with plantings on the west side of Dowest Slough, the project owner shall prepare and submit to the CPM for approval and to Dow Chemical and the City of Pittsburgh Community Development Department for review and comment, a plan for the west side of Dowest Slough (West Side Plan) covering the protocol elements (a planting plan per Protocols 1, 3, 5 and 6) of this condition.

Protocol:

The plan shall include, but not be limited to:

1. A detailed grading and planting plan, at a reasonable scale, indicating proposed plant species and sizes. The plan shall include a description of the overall design concept indicating how the plan will achieve the mitigation objectives. This description shall explain how the plan will help screen views of the power plant and maintain and enhance views of open space and the water from the highway and the Casa Medanos residential complex in the area that is north of the Pittsburgh-Antioch Highway and west of Arcy Lane.

2. A description of the plan for removing the existing ground water well structure and its surrounding vegetation screening of oleander plants on the north side of the Pittsburg-Antioch Highway.
3. A detailed list of proposed plant species and sizes (i.e., anticipated height and spread at maturity and initial sizes at time of planting) and a description of the suitability of the plants for the site conditions and mitigation objectives. Vegetation selected for landscape screening shall be in accordance with the City of Pittsburg's approved plant list.
4. A minimum of two perspective sketches or photo-simulations of views from strategic locations along the Pittsburg-Antioch Highway that illustrate the probable appearance of the view corridor, power plant, and aesthetic landscaping approximately 15 years following startup of operation of the facility.
5. A detailed irrigation plan.
6. A detailed maintenance procedures.

The project owner shall provide evidence that the City of Pittsburg Community Development Department and Dow Chemical have been consulted regarding the plan, and attach any recommendations from the City of Pittsburg Community Development Department and Dow Chemical to the plan submitted to the CPM. The project owner shall coordinate with Dow Chemical during the development of Dow's drainage retention plan for the Dowest Slough area to ensure that the aesthetic enhancement plan will be integrated with Dow's plan and that the mitigation objectives will be accomplished. If the CPM notifies the project owner that revisions to either the west side plan or the overall plan are needed before the CPM will approve the plan, the project owner shall prepare and submit to the CPM a revised plan. The landscaping screening and any other plan features shall not be installed before the plan is approved. The project owner shall notify the CPM when the plan has been implemented and is ready for inspection.

Verification:

At least 60 days prior to completion of the retention basin, the project owner shall prepare and submit to the CPM for review and approval, and to Dow Chemical and the City of Pittsburg Community Development Department for review and comment, the aesthetic enhancement plan. If a West Side Plan is prepared, at least 60 days prior to start of power plant construction or other mutually agreed upon date, the project owner shall submit it to the CPM for review and approval, and to Dow Chemical and the City of Pittsburg Community Development Department for review and comment. Following approval of the overall plan by the CPM, the project owner shall implement the plan on a schedule mutually agreed to by the CPM, Dow Chemical, and the project owner. If the project owner prepares the west side plan, the project owner shall implement that plan within 60 days after approval of the plan. The project owner shall notify the CPM within seven days after implementing either the west side plan or the overall plan that the aesthetic landscape installation is ready for inspection.

UNI-LM-VIS-7: Sound Wall Construction

[LM-VIS-4]

Triggering situation:

A 12-foot wall was needed to mitigate view of plant in order to avoid adverse visual impacts.

Description of unique condition:

The project owner has agreed with the City of Pittsburg to construct the Truck Bypass Road and a 12-foot sound wall, which were certified in Pittsburg's 1992 Final Environmental Impact Report on the Waterfront Truck Route. Even if the Truck Bypass Road is not built, the project owner shall construct a 12-foot sound wall with appropriate landscaping to mitigate project-related visual impacts within three months after construction of the power plant begins. By the end of the calendar year in which the project owner starts construction of the sound wall for the Truck Bypass Road, the project owner shall implement a treatment plan for the sound wall, the strip of land between the sound wall and Santa Fe Avenue, and the strip of land between the sound wall and the residential properties on the east side of Columbia Street. The objective of the treatment plan shall be to minimize visual impacts and to maximize the potential for community benefit.

Protocol:

The project owner shall submit to the CEC CPM for review and approval a specific plan describing its treatment plan, providing evidence that the Power Plant Advisory Committee and the City of Pittsburg have been consulted regarding the plan, and attaching any recommendations from the Power Plant Advisory Committee and the City of Pittsburg. The plan shall include, but not be limited to:

- a detailed landscape plan, at a reasonable scale, which includes a list of proposed tree and shrub species and sizes and a discussion of the suitability of the plants for the site conditions and mitigation objectives.
- maintenance procedures, including any needed irrigation; and
- a procedure for replacing unsuccessful plantings.

If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall prepare and submit to the CPM a revised plan. The landscaping and any other plan features shall not be installed before the plan is approved. The project owner shall notify the CPM, the Power Plant Advisory Committee, and the City of Pittsburg when the plan has been implemented and is ready for inspection.

Verification:

At least 60 days prior to the start of construction of the sound wall, the project owner shall submit the proposed treatment plan to the CPM for review and approval. The project owner shall also submit the proposed treatment plan to the Power Plant Advisory Committee and to the City of Pittsburg for review and comment. The project owner shall submit any required revisions within 30 days of notification by the CPM. The project owner shall notify the CPM, the Power Plant Advisory Committee, and the City of Pittsburg within seven days after implementing the proposed plan that the treatment is ready for inspection.

UNI-LM-VIS-8: Landscape Restoration for Gas Line

[LM-VIS-7]

Triggering situation:

A gasline would have disturbed landscaping in City of Antioch and City of Antioch desired to have such disturbance expressly mitigated in a condition.

Description of unique condition:

The project owner shall restore any landscaping that is disturbed during the construction or operation of the portion of the proposed fuel gas pipeline (Route 6) that would cross the City of Antioch. The project owner shall submit a plan for restoring any landscaping disturbed during construction of the proposed fuel gas pipeline. The submittal shall include evidence from the City of Antioch that the plan conforms to the requirements of Community Design Policy 2 in the City of Antioch General Plan. If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the submittal, the project owner shall submit to the CPM a revised plan. The project owner shall not implement the plan until the project owner receives approval of the submittal from the CPM. The project owner shall notify the CPM within one week after the landscaping has been installed and is ready for inspection.

Protocol:

Condition has no protocol.

Verification:

At least 30 days prior to restoring the landscaping, the project owner shall submit the plan to the CPM for review and approval. If the CPM notifies the project owner that revisions of the submittal are needed before the CPM will approve the submittal, within 30 days of receiving that notification, the project owner shall prepare and submit to the CPM a revised submittal.

The project owner shall notify the CPM within seven days after completing installation of the landscaping that the landscaping is ready for inspection.

UNI-LM-VIS-9: Transmission Pole Height

[LM-VIS-10]

Triggering situation:

New transmission poles needed to stay under minimum heights to avoid adverse visual impacts.

Description of unique condition:

All transmission poles shall be a maximum of 75 feet in height.

Protocol:

Condition has no protocol.

Verification:

The project owner shall submit to the CEC CPM for review and approval final plans for the transmission poles, specifying their height. If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall prepare and submit to the CPM a revised plan. The transmission poles shall not be installed before the plan is approved. The project owner shall notify the CPM when the poles have been installed and are ready for inspection. At least 60 days prior to the start of project construction, the project owner shall submit the plans to the CPM for review and approval. If the CPM notifies the project owner that any revisions to the plans are needed before the CPM will approve the plans, within 30 days of receiving that notification the project owner shall prepare and submit to the CPM revised plans. The project owner shall notify the CPM within 7 days after completing installation of the poles that the poles are ready for inspection. At least 60 days prior to the start of project construction, the project owner shall submit the plans to the CPM for review and approval. If the CPM notifies the project owner that any revisions to the plans are needed

before the CPM will approve the plans, within 30 days of receiving that notification the project owner shall prepare and submit to the CPM revised plans. The project owner shall notify the CPM within 7 days after completing installation of the poles that the poles are ready for inspection. At least 60 days prior to the start of project construction, the project owner shall submit the plans to the CPM for review and approval. If the CPM notifies the project owner that any revisions to the plans are needed before the CPM will approve the plans, within 30 days of receiving that notification the project owner shall prepare and submit to the CPM revised plans.

The project owner shall notify the CPM within 7 days after completing installation of the poles that the poles are ready for inspection.

MVPC'S VISUAL RESOURCES ANALYSIS

INTRODUCTION

Visual resources are the natural and cultural features of the environment that can be viewed. This analysis focuses on whether MVPP would cause significant adverse visual impacts and whether the project would be in conformance with applicable laws, ordinances, regulations, and standards (LORS). The determination of the potential for significant impacts to visual resources resulting from the proposed project is required by the California Environmental Quality Act (CEQA) Public Resources Code section 2100 et seq., and Title 20, California Code of Regulations, section 1701 et seq. 1. The determination of the conformance of the proposed project with applicable LORS is required by Public Resources Code 25525.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

The proposed project, including the power plant and associated pipeline routes, are located on both private and non-federal public lands. Therefore, the project is not subject to federal land management requirements. Additionally, none of the major roadways in the project vicinity, including Interstate 10 and Highway 30 are eligible or designated State Scenic Highways. Therefore, no federal or state regulations pertaining to visual resources are applicable to this project. However, the project viewshed comprises portions of two jurisdictional planning areas: San Bernardino County and City of Redlands. Local LORS applicable to the project are summarized in Table 6.6-1 of the AFC. Once the Santa Ana River Trail (SART) is established, it will be located within the County's Scenic Resources Overlay District. Applicable development standards for the proposed power plant expansion are included in the table.

Federal: N/A

State: N/A

Local:

The proposed site is currently under annexation by the City of Redlands. Therefore, the following codes and regulations will apply to the MVPP project. The City of Redlands Development Department regulates land uses, applies development standards for new and

existing projects, implements the building code and enforces zoning and other Municipal Ordinances within the City of Redlands. The most visible functions of the department are the processing of development projects through the Environmental Review Committee, Historic and Preservation Commission, Planning Commission and the City Council. Criteria for industrial projects including landscaping, building elevations, compatibility of design, etc., are reviewed by the City planners during the development process. The City of Redlands as specified in the Development Agreement will evaluate MVPP.

City of Redlands General Plan

The General Plan dictates overall land use within the City of Redlands. The specific sections that set forth guiding policies and implementing policies applicable to visual resources as they relate to the MVPP are Section 3.0- City Design and Preservation Element, Subsections 3.21-Historic and Scenic Conservation Areas, and 3.29-Agricultural and Scenic Areas.

As part of MVPC's efforts to annex the 82-acre property, the City of Redlands has pre-zoned the property as M-2. Due to inconsistency with specific standards under the existing City of Redlands M-2 zoning requirements, the City of Redlands Planning Commission approved Ordinance Text Amendments and a Development Agreement¹³ between the City of Redlands and the MVPC on March 14, 2000. The City Council approved the matter on April 18, 2000. The Development Agreement provides the MVPC with a vested right to develop the site to the extent allowed in M-2 industrial zones.

City of Redlands Municipal Code

The City of Redlands Municipal Code sets forth detailed standards for development projects. Based on the October 1999 Code update through Ordinance 2424, the section on the City of Redlands Municipal Code applicable to visual resources is Title 18-Zoning, Section 18.168 et seq.

Assuming annexation of the SCE/MVPC property by the City of Redlands is complete, MVPC will develop and seek approval of a finalized landscaping plan as required by the above City of Redlands Municipal Code.

San Bernardino County General Plan

San Bernardino County General Plan Policy OR-50: Identifies any portion of the regional trail system as a potential scenic resource. The proposed SART is located adjacent to the north of the power plant site. As a result, the SART will be in the County's scenic overlay district.

San Bernardino County General Plan Policy OR-51: Development along a scenic corridor required demonstrating, through visual analysis, that proposed improvements are compatible with the scenic qualities present. San Bernardino County Development Code

¹³ The Development Agreement was filed with MVPC's Data Responses on July 14, 2000

Section 85.030610: Establishes criteria to evaluate compliance of new projects within the scenic overlay district. Includes criteria for building and structure placement, landscaping, and grading.

SETTING

The proposed facility will be located on an existing facility currently being annexed by the City of Redlands in San Bernardino County. The project site consists of a total of 64 acres located adjacent to the Santa Ana River. The existing facility consists of two steam boiler generating units that feed into an immediately adjacent Southern California Edison (SCE) transmission facility and substation. The two existing units utilize groundwater in cooling towers for cooling purposes and provide a nominal gross output of 66 MW each. The proposed new facility will utilize 18.7 already hardpacked or paved acres of the site, mostly to the North of the existing facility.

The area can be best described as an industrial region with other industrial areas and a mixture of residential and commercial zones nearby. To the North of site lies the Santa Ana River, dry most of the year, which has numerous other industrial and commercial facilities along its side. Directly across the Santa Ana River is the former Norton Air Force Base, now the San Bernardino International Airport. It primarily serves as a commercial airport with large cargo planes flying in and out on a regular basis. The Santa Ana River itself has been highly disturbed, with reinforced or concrete channel banks, numerous surface mining operations going on to the North within the river bed. To the East of the Site lie agricultural land and a water treatment facility. To the South lies agricultural land followed by the Highway -10 freeway. To the west lie commercial, light industrial and residential areas. The residential area is and small enclave to the Southwest of the facility.

No residential or industrial developments have been proposed within a 2-mile radius of the site. Several developers are considering commercial development for much of the remaining undeveloped land in the area. There are several schools and other potentially significant point sources of criteria and non-criteria pollutants in the area. Additionally the project is in a non-attainment region for PM-10 and Ozone [is this all] requiring offsetting of these to pollutants.

IMPACTS

Any potential impacts would affect potential future users of the proposed Santa Ana River Trail (SART). To mitigate any potential impacts and in order to reduce the need for further analysis, MVPC has agreed to include a tree planting along the northern edge of the property. This mitigation will remove any potential visual impacts to the future SART users.

Viewpoints remaining in question will be significantly impacted. The facility already had an existing power plant with two exhaust stacks. Transmission lines are abundant in the region and an older tile facility is also visible.

MITIGATION

Where economically feasible, all new equipment and fencing will be constructed of materials that will restrict glare. The power plant structures and equipment will be furnished with flat gray paint. Use of a flat finish will reduce the reflectivity of the surfaces and the color tone proposed will help the plant blend in with the middleground and background views.

To the extent possible, Units 3 and 4 lighting at the power plant site will be shielded from public view.

MVPC will comply with the applicable provisions of the County of San Bernardino and/or City of Redlands development guidelines for project features related to visual elements such as landscaping, building elevations, etc.

MCVP will work with the County of San Bernardino Department of Community and Cultural Resources to develop a landscape/grading plan to screen views of the new structures from the future SART. A draft mitigation, landscaping plan was submitted.

Cumulative Impacts

Possible cumulative impacts would include potentially negative changes to the visual setting from the proposed project in combination with existing visually significant facilities and any future development in the project watershed. The proposed project will add industrial features in the project area, but would not substantially lessen the already degraded visual conditions created by the existing power plant structures and adjacent transmission lines. Additionally, discussions with the County of San Bernardino and City of Redlands Planning Departments indicated that there are no planned or proposed projects in the immediate vicinity of the power plant that would create significant visual impacts. Therefore, there will not be a significant cumulative impact due to the proposed project.

FACILITY CLOSURE

No significant visual impacts are expected due to closure of the power plant.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions:

With the proposed mitigation, the project is expected to be in compliance with applicable laws, ordinances, regulations, and standards regarding visual resources.

Recommendations:

MVPC recommends that the below conditions be adopted.

MVPC'S CONDITIONS ANALYSIS

DISPOSITION OF STANDARD CONDITIONS

STAN-VIS-1: Applicable

This condition requires the project owner to treat the project structures, buildings, and tanks visible to the public in non-reflective colors to blend with the agricultural setting. This condition is applicable to the MVPP as it ensures compliance with the applicable LORS

STAN-VIS-2: Applicable

This condition requires any fencing for the project to be non-reflective.

STAN-VIS-3: Applicable

This condition requires the project owner to design and install all lighting, so it's not visible from public viewing areas and illumination of the vicinity. This condition is applicable to the MVPP as it ensures compliance with the applicable LORS

STAN-VIS-4: Applicable

This condition requires the project owner to implement a landscape plan that meets the requirements of the Zoning Code and provide a continuous screen of the proposed power plant from sensitive view areas. This condition is applicable to the MVPP as it ensures compliance with the applicable LORS. The landscape plan will incorporate the tree planting along northern edge of property.

DISPOSITION OF CATEGORIAL CONDITIONS

CAT-VIS-1: Not needed

This condition required the project owner to not place all electrical transmission poles in direct view of any residence. To minimize potential visual impacts, the project owner was required to place all electrical transmission poles so as to not be directly in front of any residence.

DISPOSITION OF UNIQUE CONDITIONS

UNI-VIS-1: Not needed

This condition required the Sutter Power Project to reduce the contribution of the Sutter Power Project to cumulative visual impacts. It further required the project owner to have the Greenleaf 1 facilities painted to match the colors of the Sutter Power Project.

UNI-VIS-2: Not needed

This condition required the Sutter Power Project to offset the contribution of cumulative lighting impacts by modifying the lighting at the Greenleaf 1 Power Plant so that light

bulbs and reflectors were not visible from public viewing areas and illumination of the vicinity.

UNI-VIS-3: Not needed

This condition required the project owner to restore any and all areas that were disturbed during the construction or operation of any portions of the proposed underground utilities.

UNI-VIS-4: Not needed

This condition required the project owner to install temporary aesthetic screening along the south and west portions of the perimeter of the construction laydown area. It further required screening to be high enough to obscure views of most of the lighting, as well as equipment, vehicles, and materials in the area, from the highway and an existing apartment complex to the south.

UNI-VIS-5: Not needed

This condition required the project owner to install aesthetic screening immediately following completion of construction of the power plant along the south and west edges of the power plant site so as to partially screen views of lower portion of the facility from the Pittsburg-Antioch Highway and nearby residences. This condition further described in detail the types of screening to be used.

UNI-DEC-VIS-6: Not needed

This condition requires the project owner to prepare and implement an aesthetic enhancement plan for the Dowest Slough area. Prior to completion of construction of, the project owner was to submit to the CPM for review and approval, and to Dow Chemical and the City of Pittsburg Community Development Department for review and comment, an aesthetic enhancement plan as described in the Protocol section of this condition.

UNI-LM-VIS-7: Not needed

This condition required the project owner to construct the Truck Bypass Road and a 12-foot sound wall, which was certified in Pittsburg's 1992 Final Environmental Impact Report on the Waterfront Truck Route. It further detailed that the sound wall must have appropriate landscaping to mitigate project-related visual impacts within three months after construction of the power plant begins.

UNI-LM-VIS-8: Not needed

This condition required the project owner to restore any landscaping that disturbed during the construction or operation of the portion of the proposed fuel gas pipeline.

UNI-LM-VIS-9: Not needed

This condition set forth maximum height of all transmission poles.

MVPP'S STIPULATED CONDITIONS OF CERTIFICATION

VIS-1: Prior to the first electricity generation, the project owner shall treat the new project structures, buildings, and tanks visible to the public in non-reflective colors to blend with the agricultural setting.

Protocol: The project owner shall submit a treatment plan for the project to the CPM for review and approval. The treatment plan shall include:

- Specification, and 11"x17" color simulations of the treatment proposed for use on project structures, including structures treated during manufacture;
- A detailed schedule for completion of the treatment; and
- A procedure to ensure proper treatment maintenance for the life of the project.

If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall submit to the CPM a revised plan. After approval of the plan by the CPM, the project owner shall implement the plan according to the schedule and shall ensure that the treatment is properly maintained for the life of the project. For any structures that are treated during manufacture, the project owner shall not specify the treatment of such structures to the vendors until the project owner receives notification of approval of the treatment plan by the CPM. The project owner shall not perform the final treatment on any structures until the project owner receives notification of approval of the treatment plan from the CPM. The project owner shall notify the CPM within one week after all pre-colored structures have been erected and all structures to be treated in the field have been treated and the structures are ready for inspection.

Verification: Not later than 60 days prior to ordering any structures that are to be color treated during manufacture, the project owner shall submit its proposed plan to the CPM for review and approval.

If the CPM notifies the project owner that any revisions of the plan are needed before the CPM will approve the plan, within 30 days of receiving that notification, the project owner shall submit to the CPM a revised plan.

Not less than thirty days prior to first electricity generation, the project owner shall notify the CPM that all structures treated during manufacture and all structures treated in the field are ready for inspection. The project owner shall provide a status report regarding treatment maintenance in the Annual Compliance Report.

VIS-2: Any new fencing for the project shall be non-reflective.

Protocol: At least 30 days prior to ordering the fencing the project owner shall submit to the CPM for review and approval the specifications for the fencing documenting that such fencing will be non-reflective. If the CPM notifies the project owner that revisions

of the specifications are needed before the CPM will approve the submittal, the project owner shall submit to the CPM revised specifications.

The project owner shall not order the fencing until the project owner receives approval of the fencing submittal from the CPM.

The project owner shall notify the CPM within one week after the fencing has been installed and is ready for inspection.

Verification: At least 60 days prior to ordering the non-reflective fencing, the project owner shall submit the specifications to the CPM for review and approval.

If the CPM notifies the project owner that revisions of the submittal are needed before the CPM will approve the submittal, within 30 days of receiving that notification, the project owner shall prepare and submit to the CPM a revised submittal.

The project owner shall notify the CPM within seven days after completing installation of the fencing that the fencing is ready for inspection.

VIS-3: Project Owner shall design and install all new lighting, so that it is not visible from public viewing areas and illumination of the vicinity and the nighttime sky is numbered.

Protocol: The project owner shall develop and submit a lighting plan for the project to the CPM and the City of Redlands Planning Department for review and approval. The lighting plan shall require that:

- Lighting is designed so that exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of this outdoor lighting shall be such that the luminescence or light source is shielded to prevent light trespass outside the project boundary;
- High illumination areas not occupied on a continuous basis such as maintenance platforms or the main entrance are provided with switches or motion detectors to light the area only when occupied;
- A lighting complaint resolution form (similar in general format to that in Visual Attachment 1, which follows these Conditions) will be used by plant operations, to record all lighting complaints received and document the resolution of those complaints. All records of lighting complaints shall be kept in the on-site compliance file. If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall prepare and submit to the CPM a revised plan.
- Lighting shall not be installed before the plan is approved. The project owner shall notify the CPM when the lighting has been installed and is ready for inspection.

Verification: At least 60 days before ordering the exterior lighting, the project owner shall provide the lighting plan to the CPM and to the Sutter County Community Services Department for review and approval.

If the CPM notifies the project owner that any revisions of the plan are needed before the CPM will approve the plan, within 30 days of receiving that notification the project owner shall submit to the CPM a revised plan.

The project owner shall notify the CPM within seven days of completing exterior lighting installation that the lighting is ready for inspection.

VIS-4: By December 1 of the year in which ground disturbance related to construction of the power plant begins, the project owner shall implement a landscape plan that meets the requirements of the City of Redlands and provides a continuous screen of the proposed power plant from sensitive view areas. The screen shall be created along the northern boundaries of the property to the North along the proposed SART .

Protocol: The project owner shall submit to the CEC CPM for review and approval a specific plan describing its landscaping proposal, stating that it conforms to the City of Redlands Zoning Code and has been approved by the County. The plan shall include, but not be limited to:

- A detailed landscape plan, at a reasonable scale, which includes a list of proposed tree and shrub species and sizes and a discussion of the suitability of the plants for the site conditions and mitigation objectives.
- One objective shall be to provide year-round screening. To meet this objective evergreen species shall be used. This may require a berm to raise the tree roots above the water table. Another objective shall be to provide screening at least 75 feet tall for the total distance to be screened, except where clearance beneath the proposed transmission line requires shorter trees. Another objective shall be to use species that grow rapidly. The plan shall propose species and spacing to achieve these objectives. Trees to be planted shall be the optimal size to reach full height as rapidly as possible.
- Maintenance procedures, including any needed irrigation; and
- A procedure for replacing unsuccessful plantings.

If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall prepare and submit to the CPM a revised plan. The trees and shrubs shall not be planted before the plan is approved. The project owner shall notify the CPM when the trees and shrubs have been planted and are ready for inspection.

Verification: At least 90 days prior to the start of commercial operation of the project, the project owner shall submit the proposed landscape plan for the project to the CPM for review and approval. The CPM will respond to the project owner within 15 days of receipt of the landscaping plan. The project owner shall submit any required revisions within 30 days of notification by the CPM. The CPM will respond to the project owner within 15 days of receipt of the revised documents. The project owner shall notify the CPM within seven days after completing the proposed planting that the planting is ready for inspection.

UNRESOLVED ISSUES IN VISUAL

MVPC is not aware of any visual issues requiring further exploration, analysis or mitigation. MVPC submits the above-stipulated conditions believing that the area of visual will be thus fully addressed.

CULTURAL RESOURCES

This section presents a comprehensive analysis of cultural resources, both in previously permitted projects and in the case of the Mountainview Power Plant (MVPP)¹⁴. Previously permitted projects, all combined cycle, natural gas plants, are analyzed for their standard, categorical and unique conditions as well as what triggered each categorical and unique condition. Then, MVPP is juxtaposed with past projects allowing necessary conditions to be identified. A complete review of applicable laws, ordinances, regulations and standards (LORS) and the setting of the MVPP is presented. This foundation of past and present impacts and LORS allows Mountainview Power Company (MVPC) to stipulate to all necessary conditions that provide required mitigation and ensure LORS compliance. The section closes by identifying any outstanding issues not resolved by the stipulated conditions.

OVERVIEW OF CULTURAL RESOURCES ISSUE AREA

Cultural resources involves assessing the place or places where the remnants of a past culture survive in a physical content that allows for the interpretation of these remains. In the context of power plant construction and operation, it is often construction that cultural resources analysis is most concerned with. All five previously permitted projects had the same standard fourteen cultural resources conditions imposed with only slight variation. There has been one categorical cultural resources condition and two unique conditions. The categorical addressed in LP and HD dealt with a BLM Archaeological Resource Use Permit. The two unique conditions addressed in HD dealt with Construction Method and Facility Closure.

PAST CULTURAL CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-CUL-1	Designated Cultural Resource Specialist and Mitigation Team Members	Yes
STAN-CUL-2	Provision of Maps and Drawings	Yes
STAN-CUL-3	Draft Cultural Resources Monitoring and Mitigation Plan	Yes
STAN-CUL-4	Pre-Construction Reconnaissance and Staking	Yes

¹⁴ As in all the sections of this document, abbreviations are used for the last five permitted projects before the California Energy Commission. Those abbreviations are:
SPP = Sutter Power Plant
DEC = Delta Energy Center
LM = Los Medanos Energy Center
HD = High Desert
LP = La Paloma

STAN-CUL-5	Employee Training Program	Yes
STAN-CUL-6	Training Regarding Operation of Ground Disturbing Equipment	Yes
STAN-CUL-7	Weekly Project Activity Report to Designated Cultural Resource Specialist	Yes
STAN-CUL-8	Presence of the Designated Cultural Resource Specialist On-Site	Yes
STAN-CUL-9	Encounter of Sensitive Resources	Yes
STAN-CUL-10	Curation of Significant Cultural Resource Materials	Yes
STAN-CUL-11	Preliminary Cultural Resources Report	Yes
STAN-CUL-12	Final Cultural Resources Report	Yes
STAN-CUL-13	Provide Final Cultural Resources Report to CPM	Yes
STAN-CUL-14	Delivery of Collected Cultural Materials	Yes
CAT-CUL-1	Bureau of Land Management Archaeological Resource Use Permit	No
UNI-CUL-1	Cut and Cover Construction Method	No
UNI-CUL-2	Facility Closure Cultural Resources Plan	No

STANDARD CULTURAL RESOURCES CONDITIONS

STAN-CUL-1: Designated Cultural Resource Specialist and Mitigation Team Members

[SPP-CUL-1]; [LP-CUL-1]; [DEC-CUL-1]; [LM-CUL-2 & 1]; [HD-CUL-1]

Description of standard condition:

Prior to construction, the project owner shall provide the CEC CPM with the name(s) and qualifications of its designated cultural resource specialist and mitigation team members.

Protocol:

a. The statement of qualifications for the designated cultural resource specialist shall include all information needed to demonstrate that the specialist meets the minimum qualifications specified in the US Secretary of Interior Guidelines, as published by the State Office of Historic Preservation (1983). The minimum qualifications include the following:

- 1) a graduate degree in anthropology, archaeology, California history, cultural resource management, or a comparable field;
- 2) at least three years of archaeological resource mitigation and field experience in California; and
- 3) at least one year s experience in each of the following areas:
 - a. leading archaeological resource field surveys;

- b. leading site and artifact mapping, recording, and recovery operations;
- c. marshalling and use of equipment necessary for cultural resource recovery and testing;
- d. preparing recovered materials for analysis and identification;
- e. determining the need for appropriate sampling and/or testing in the field and in the lab;
- f. directing the analyses of mapped and recovered artifacts;
- g. completing the identification and inventory of recovered cultural resource materials; and,
- h. preparing appropriate reports to be filed with the receiving curation repository, the SHPO, all appropriate regional archaeological information center(s).

The statement of qualifications for the designated cultural resource specialist shall include:

- 1. a list of specific projects on which the specialist has previously worked;
- 2. the role and responsibilities of the specialist for each project listed; and,
- 3. the names and phone numbers of contacts familiar with the specialist's work on these referenced projects.

Verification:

At least 90 days prior to the start of project construction, the project owner shall submit the name and statement of qualifications of its designated cultural resource specialist to the CPM for review and written approval. At least 10 days but no more than 30 days prior to the start of construction, the project owner shall confirm in writing to the CPM that the approved designated cultural resource specialist will be available at the start of construction. And, furthermore, that the cultural resource specialist is prepared to implement the cultural resource Conditions of Certification. At least 10 days prior to the termination or release of a designated cultural resource specialist, the project owner shall obtain CPM approval of the replacement specialist by submitting to the CPM the name and resume of the proposed new designated cultural resource specialist.

STAN-CUL-2: Provision of Maps and Drawings

[SPP-CUL-2]; [LP-CUL-2]; [DEC-CUL-2]; [LM-CUL-3]; [HD-CUL-3]

Description of standard condition:

Prior to construction, the project owner shall provide the designated cultural specialist and the CPM with maps and drawings for the project.

Protocol:

Condition has no protocol.

Verification:

At least 75 days prior to the start of construction on the project and linear facilities, the project owner shall provide the designated cultural resource specialist and the CPM with final drawings and site layouts for each project facility and maps at appropriate scale(s) for all areas potentially affected by project construction. If the designated cultural resource specialist requests enlargements or strip maps for linear facility routes, the project owner shall also provide a set of these maps to the CPM at the same time that they are provided to the specialist.

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STAN-CUL-3: Draft Cultural Resources Monitoring and Mitigation Plan
[SPP-CUL-3]; [LP-CUL-3&11]; [DEC-CUL-3]; [LM-CUL-4]; [HD-CUL-5]

Description of standard condition:

Prior to construction, the designated cultural specialist shall prepare a draft Cultural Resources Monitoring and Mitigation Plan. The Cultural Resources Monitoring and Mitigation Plan shall include, but not be limited to, the following elements and measures:

- a. A proposed research design that includes a discussion of questions that may be answered by the mapping, data and artifact recovery conducted during monitoring and mitigation activities, and by the post-construction analysis of recovered data and materials.
- b. A discussion of the implementation sequence and the estimated time frames needed to accomplish all project-related tasks during the pre-construction, construction, and post-construction analysis phases of the project.
- c. Identification of the person(s) expected to perform each of the tasks and description of the mitigation team organizational structure and the inter-relationship of team roles and responsibilities. Specification of the qualifications of any professional team members.
- d. A discussion of the need for Native American observers or monitors, the procedures to be used to select them, the areas or post-mile sections where they will be needed, and their role and responsibilities.
- e. A discussion of measures such as flagging or fencing, to prohibit or otherwise restrict access to sensitive resource areas that are to be avoided during construction and/or operation, and identification of areas where these measures are to be implemented. The discussion shall address how these measures will be implemented prior to the start of construction and how long they will be needed to protect the resources from project-related effects.
- f. A discussion of where monitoring of project construction activities is deemed necessary by the designated cultural resource specialist. The specialist will determine the size or extent of the areas where monitoring is to occur and will establish the percentage of the time that the monitor(s) will be present. The areas to be monitored shall include the power plant site, the construction lay-down area, the natural gas pipeline route, and the 230 kV electric transmission line route.
- g. A discussion of the requirement that all cultural resources encountered will be recorded and mapped (may include photos) and all significant or diagnostic resources will be collected for analysis and eventual curation into a retrievable storage collection in a public repository or museum that meets the US Secretary of Interior standards and requirements for the curation of cultural resources.
- h. A discussion of the availability and the designated specialist's access to equipment and supplies necessary for site mapping, photographing, and recovering any cultural resource materials encountered during construction.
- i. Identification of the public institution that has agreed to receive any data and cultural resources recovered during project-related monitoring and mitigation work. Discussion of any requirements, specifications, or funding needed for the materials to be delivered for curation and how they will be met. Also include the name and phone number of the contact person at the institution.

Protocol:

Condition has no protocol.

Verification:

At least 60 days prior to the start of construction on the project, the project owner shall provide the Cultural Resources Monitoring and Mitigation Plan, prepared by the designated cultural resource specialist, to the CPM for review and written approval.

STAN-CUL-4: Pre-construction Reconnaissance and Staking

[SPP-CUL-4]; [LP-CUL-8]; [DEC-CUL-8]

Description of standard condition:

Prior to construction, the project owner shall conduct a pre-construction reconnaissance and staking in all areas expected to be affected by construction and operation of the project and its associated linear facilities.

Protocol:

Condition has no protocol.

Verification:

Throughout the project construction period, the project owner shall ensure that the daily log and weekly summaries are available for periodic audit by the CPM. Upon request by the CPM, the project owner shall provide specified weekly summaries to the CPM.

STAN-CUL-5: Employee Training Program

[SPP-CUL-5]; [LP-CUL-4]; [DEC-CUL-4]; [LM-CUL-5]; [HD-CUL-6]

Description of standard condition:

Prior to construction, the designated cultural resource specialist shall prepare an employee training program. The program shall be submitted to the CEC CPM. The training program shall discuss the potential to encounter cultural resources in the field, the sensitivity and importance of these resources, and the legal obligations to preserve and protect such resources.

The training program shall also include the set of resource reporting procedures and work curtailment procedures that workers are to follow if previously unknown cultural resources are encountered during project activities. The training program shall be presented by the designated cultural resource specialist or qualified individual(s) approved by the CPM and may be combined with other training programs prepared for biological resources, paleontological resources, hazardous materials, or any other areas of interest or concern.

Protocol:

Condition has no protocol.

Verification:

At least 60 days prior to the start of construction on the project, the project owner shall submit to the CPM for review and written approval, the proposed employee training program, the set of reporting procedures, and the work curtailment procedures that the workers are to follow if previously unknown cultural resources are encountered during construction. The project owner shall provide the name and resume of the individual(s) performing the training.

STAN-CUL-6: Training Regarding Operation of Ground Disturbing Equipment

[SPP-CUL-6]; [LP-CUL-5]; [DEC-CUL-5]; [LM-CUL-6]; [HD-CUL-7]

Description of standard condition:

Prior to and throughout construction, the cultural resource specialist shall provide training to all new employees, project managers, construction supervisors, and workers who operate ground-disturbing equipment.

Protocol:

Condition has no protocol.

Verification:

Within 7 days after the start of construction, the project owner shall provide the CPM with documentation that the designated cultural resources trainer(s) has/have provided to all project managers, construction supervisors, and workers hired before the start of construction the CEC-approved cultural resources training and the set of reporting and work curtailment procedures.

In each Monthly Compliance Report after the start of construction, the project owner shall provide the CPM with documentation that the designated cultural resource trainer(s) has/have provided to all project managers hired in the month to which the report applies the CPM-approved cultural resources training and the set of reporting and work curtailment procedures.

STAN-CUL-7: Weekly Project Activity Report to Designated Cultural Resource Specialist

[SPP-CUL-7]; [LP-CUL-7]; [DEC-CUL-7]; [LM-CUL-8 & 9]; [HD-CUL-8]

Description of standard condition:

Throughout the project construction period, the project owner shall provide the designated cultural resource specialist with a current schedule of anticipated weekly project activity and a map indicating the area(s) where construction will occur.

Protocol:

Condition has no protocol.

Verification:

At least 10 days prior to the start of construction involving ground-disturbing activities, and in each monthly compliance report, the project owner shall provide the CPM with copies of the schedules and maps provided to the designated cultural resource specialist. The project owner shall notify the CPM when all ground disturbing activities, including landscaping, are completed.

STAN-CUL-8: Presence of the Designated Cultural Resource Specialist On-Site

[SPP-CUL-8]; [LP-CUL-9]; [DEC-CUL-9]; [HD-CUL-9] [LM-CUL-10]

Description of standard condition:

The designated cultural resource specialist shall be present at the construction site at all times when construction-related grading, excavation, trenching an/or auguring occurs in areas of previously recorded archaeological sites.

Protocol:

If the designated cultural resource specialist determines that full-time monitoring is not necessary in certain portions of the project area or along portions of the linear facility routes, the designated specialist shall notify the project owner and the CPM of the changes. The designated cultural resource specialist shall use milepost markers and boundary stakes placed by the project owner to identify areas where monitoring is being reduced or is no longer deemed necessary.

Verification:

Throughout the project construction period the project owner shall include in the Monthly Compliance Reports to the CPM copies of the weekly summary reports prepared by the designated cultural resource specialist regarding project-related cultural resource monitoring.

STAN-CUL-9: Encounter of Sensitive Resources

[SPP-SUL-9]; [LP-CUL-6]; [DEC-CUL-6]; [LM-CUL-7] [MO-CUL-5]

Description of standard conditions:

The designated cultural resource specialist or their delegated monitor shall have the authority to halt or redirect construction if potentially significant previously unknown cultural resource sites or materials are encountered during project-related grading, auguring, excavation, and/or trenching. If such resources are found and the specialist determines that they are not significant, the specialist may allow construction to resume. The project owner shall notify the CPM of the find as set forth in the Verification section. If such resources are found and the specialist determines that they are or may be significant, the halting or redirection of construction shall remain in effect until:

- a. the designated cultural resources specialist has notified the CPM of the find and the work stoppage;
- b. the specialist, the project owner, and the CPM have conferred and determined what, if any, data recovery or other mitigation is needed; and,
- c. any necessary data recovery and mitigation has been completed.

The designated cultural resources specialist, the project owner, and the CPM shall confer within five working days of the notification of the CPM to determine what, if any, data recovery or other mitigation is needed.

If data recovery or other mitigation measures are required, the designated cultural resource specialist and team members shall monitor construction activities and implement data recovery and mitigation measures, as needed.

All required data recovery and mitigation shall be completed expeditiously unless all parties agree to additional time.

Protocol:

Condition has no protocol.

Verification:

At least 30 days prior to the start of construction, the project owner shall provide the CPM with a letter confirming that the designated cultural resources specialist has the authority to halt construction activities in the vicinity of a cultural resource find.

For any cultural resource encountered that the specialist determines is or may be significant, the project owner shall notify the CPM as soon as possible.

For any cultural resource encountered that the specialist determines is not significant, the project owner shall notify the CPM within 72 hours after the find.

STAN-CUL-10: Curation of Significant Cultural Resource Materials

[SPP-CUL-10]; [DEC-CUL-10]; [LM-CUL-11]; [HD-CUL-12]

Description of standard condition:

The project owner shall ensure the recovery, preparation for analysis, identification and inventory, the preparation for curation and the delivery for curation of all significant cultural resource materials encountered and collected during mapping and mitigation activities.

Protocol:

Condition has no protocol.

Verification:

The project owner shall maintain in its compliance files, copies of signed contracts or agreements with the designated cultural rescue specialist and other qualified research

specialists. These specialists will ensure the necessary recovery, preparation for analysis, identification and inventory, and preparation for curation of all significant cultural resource materials collected during monitoring, data recovery, mapping, and mitigation activities for the project. The project owner shall keep these files on-site and available for periodic audit by the CPM, for a period of at least two years after completion of the approved Final Cultural Resources Report.

STAN-CUL-11: Preliminary Cultural Resources Report

[SPP-CUL-11]; [LP-CUL-13]; [DEC-CUL-11]; [LM-CUL-12]; [HD-CUL-13]

Description of standard condition:

The project owner shall ensure preparation of a Preliminary Cultural Resources Report following completion of data recovery and site mitigation work.

Protocol:

The proposed scope of work shall include (but not be limited to):

- a. discussion of any analysis to be conducted on recovered cultural resource materials;
- b. discussion of possible results and findings,
- c. proposed research questions which may be answered or raised by analysis of the data recovered from the project; and,
- d. an estimate of the time needed to complete the analysis of recovered cultural resource materials and prepare the Cultural Resources Report.

Verification:

The project owner shall ensure that the designated cultural resources specialist prepares the proposed scope of work within 90 days following completion of the data recovery and site mitigation work. Within 7 days after completion of the proposed scope of work, the project owner shall submit it to the CPM for review and written approval.

STAN-CUL-12: Final Cultural Resources Report

[SPP-CUL-12]; [LP-CUL-14]; [DEC-CUL-12]; [LM-CUL-13]; [HD-CUL-14]

Description of standard condition:

The project owner shall ensure preparation of a Final Cultural Resources Report following completion of data recovery and site mitigation work.

Protocol:

The Cultural Resources Report shall include (but not be limited to) the following for all projects:

1. description of pre-project literature search, surveys, and any testing activities;
2. maps of showing areas surveyed or tested;
3. description of any monitoring activities;
4. maps of any areas monitored; and,
5. conclusions and recommendations.

For projects in which cultural resources were encountered, and include the items specified under a of STAN-CUL-11 and also provide:

1. site and isolate records and maps;
2. description of testing for, and determinations of, significance and potential eligibility; and,
3. research questions answered or raised by the data from the project.

For projects regarding which cultural resources were recovered, include the items specified under a and b of STAN-CUL-11 and also provide:

1. descriptions (including drawings and/or photos) of recovered cultural materials;
2. results and findings of any special analyses conducted on recovered cultural resource materials;
3. an inventory list of recovered cultural resource materials; and,
4. the name and location of the public repository receiving the recovered cultural resources for curation.

Verification:

The project owner shall ensure that the designated cultural resources specialist completes the Cultural Resources Report within 90 days following completion of the analysis of the recovered cultural materials. Within 7 days after completion of the report, the project owner shall submit the Cultural Resources Report to the CPM for review and written approval.

STAN-CUL-13: Provide Final Cultural Resources Report to CPM

[SPP-CUL-13]; [LP-CUL-15]; [DEC-CUL-13]; [LM-CUL-14]; [HD-CUL-15]

Description of standard condition:

The project owner shall provide the CPM with an original copy of the Final Cultural Resources Report and other copies necessary to submit to the public institution receiving the recovered data and materials for curation.

Protocol:

The copies of the Cultural Resource Report to be sent to the curating repository, the SHPO, and the regional information center(s) shall include the following (based on the applicable scenario (a, b or c) set forth in the previous condition):

- a. originals or original-quality copies of all text;
- b. originals of any topographic maps showing site and resource locations;
- c. originals or original-quality copies of drawings of significant or diagnostic cultural resource materials found during pre-construction surveys or during project-related monitoring, data recovery, or mitigation; and,
- d. photographs of the site(s) and the various cultural resource materials recovered during project monitoring and mitigation and subjected to post-recovery analysis and evaluation. The project owner shall provide the curating repository with a set of negatives for all of the photographs.

Verification: Within 30 days after receiving approval of the Cultural Resources Report, the project owner shall provide to the CPM documentation that the report has been sent to the public repository receiving the recovered data and materials for curation, the SHPO, and the appropriate archaeological information center(s). For the life of the project the project owner shall maintain in its compliance files copies of all documentation related to the filing of the CPM-approved Cultural Resources Report with the public repository receiving the recovered data and materials for curation, the SHPO, and the appropriate archaeological information center(s).

STAN-CUL-14: Delivery of Collected Cultural Materials

[SPP-CUL-14]; [LP-CUL-16]; [DEC-CUL-14]; [LM-CUL-15]; [HD-CUL-16]

Description of standard condition:

Within 30 days following the Final Cultural Resources Report with the CPM, etc., the project owner shall deliver for curation all cultural resource materials collected during data recovery and mitigation for the project.

Protocol:

Condition has no protocol.

Verification:

The project owner shall ensure that all recovered cultural resource materials are delivered for curation within 30 days after providing the CPM-approved Cultural Resource Report to the public repository receiving the recovered data and materials, to the SHPO, and to the appropriate archaeological information center(s).

For the life of the project the project owner shall maintain in its project history or compliance files, copies of signed contracts or agreements with the public repository to which the project owner has delivered for curation all cultural resource materials collected during data recovery and mitigation for the project.

CATEGORICAL CULTURAL RESOURCES MANAGEMENT CONDITIONS

There has been one categorical condition in the area of cultural resources dealing with BLM Archaeological Resource Use Permit.

CAT-CUL-1: Bureau of Land Management Archaeological Resource Use Permit
[LP-CUL-10]; [HD-CUL-4 & 10]

Description of condition:

The project owner shall ensure that the designated cultural resource specialist obtains and maintains a current BLM Archaeological Resource Use Permit to gain access to lands managed by the BLM or other federal agencies.

Triggering Circumstance:

Project work in land managed by BLM or other Federal Agency

Protocol:

Condition has no protocol.

Verification:

The project owner shall provide the CPM and the designated Bureau of Land Management BLM representative(s) with a copy of the BLM archaeological resource use permit received by the designated cultural resources specialist in the next Monthly Compliance Report following its receipt or renewal.

UNIQUE CULTURAL RESOURCES CONDITIONS

There have been two unique conditions in the area of cultural resources, both are in the LP project.

UNI-CUL-1: Cut and Cover Construction Method
[DEC-CUL-15]

Description of condition:

If cut and cover construction rather than directional drilling is used to construct the natural gas pipeline across the Los Medanos Wasteway, the project owner shall consult with the US Bureau of Reclamation and the CPM regarding compliance with Section 106 of the National Historic Preservation Act. The project owner shall implement any cultural resources mitigation measures required by the US Bureau of Reclamation and the CPM as a result of such consultation.

Triggering Situation:

Potential trenching of waterway not analyzed for in AFC process or not permitted for.

Protocol:

Condition has no protocol.

Verification:

At least 60 days prior to any ground disturbing activity associated with construction of the portion of the natural gas line across the Los Medanos Wasteway, the project owner shall notify the U.S. Bureau of Reclamation and the CPM regarding the type of construction that will be used. If cut and cover construction rather than directional drilling is used, at least 30 days prior to any ground disturbing activity associated with construction of the portion of the natural gas line across the Los Medanos Wasteway the project owner shall consult with the U.S. Bureau of Reclamation and the CPM. Within 30 days after completing construction of the portion of the natural gas pipeline across the Los Medanos Wasteway, the project owner shall provide to the U.S. Bureau of Reclamation and the CPM written documentation that the project owner has complied with mitigation measures required as a result of the consultation.

UNI-CUL-2: Facility Closure Cultural Resources Plan

[DEC-CUL-16]

Description of unique condition:

The project owner shall include in the facility closure plan, a description regarding facility closure activities potential to impact cultural resources. The conditions for closure will be determined when a facility closure plan is submitted to the CPM 12 months prior to the closure of the facility. If no activities are proposed that would potentially impact cultural resources, then no mitigation measures for cultural resource management are required in the facility closure plan.

Triggering Situation:

Potential cultural resources impact upon facility closure.

Protocol:

The closure requirements for cultural resources are to be based upon the Cultural Resources Report and the proposed grading activities for facility closure.

- The project owner shall include a description of closure activities described above in the facility closure plan.

Verification:

No identified verification.

MVPP's CULTURAL ANALYSIS

INTRODUCTION

The area of cultural resources focuses on the evidence of human occupation or use of the land. Such evidence may be physical, as in the form of artifacts or structures left by those or came earlier; archival, in the form of early documents, photographs, or maps; or the creation or modification of historical landscapes as the result of agriculture, mining or other endeavors. Places regarded as important by Native Americans or local national/ethnic groups may also be considered cultural resources. All such evidence of California's early occupation is becoming increasingly vulnerable due to the ongoing development, industrialization, and urbanization of the State.

Cultural resource materials may be found nearly everywhere in California. They are found from the offshore islands to the desert interiors; along rivers and streams; from inland valleys to mountain peaks; and in particular environmental niches where natural resources such as plants and animals sought as food, mineral or other useful raw materials occur. Cultural resources may be visible on the surface or deeply buried as a result of sedimentation or subsequent uses of the same land. In some areas, a sequence of settlements on the same site may result in multiple layers of cultural resources, often of both prehistoric and historical origins.

Cultural resources are the key to understanding our history and heritage, as reflected in the many cultures which have contributed to the present. Critical to such analysis are the spatial relationships between the constituents of an undisturbed site and the environmental resources and features as they existed at the time of each occupation. The goal of reconstructing the sequences of human occupation and land use in relation to the prevailing environment is to approach insights into the way of life of the former inhabitants, and explanations for their behaviors and changes in the cultures.

MVPC understands that Staff's primary concern is that the area of cultural resource analysis ensures that all resources are identified, potential impacts are made known, and conditions are set forth to avoid significant impacts. The determination of potential impacts to cultural resources from the proposed MVPP is required by the Siting Regulations of the CEC and by the California Environmental Quality Act (CEQA).

PREHISTORIC RESOURCES

Prehistoric archaeological resources are those materials related to prehistoric human occupation and use of an area. They may include sites and deposits, structures, artifacts, rock art, trails, and other remains of Native American presence. In California, the prehistoric period began more than 10,000 years ago and extended through the eighteenth century when the first Euroamerican explorers visited California. While Native American cultural materials are typically categorized as "prehistoric," it should be recognized that many groups and individuals maintained traditional lifeways well into historical times, participating as employees on the ranches and in other enterprises.

HISTORIC RESOURCES

Historic resources are those that pertain to the period after the beginning of written records, usually beginning with Euroamerican exploration and settlement. They may be archaeological, in the form of wells, privies, trash deposits, or subsurface remains of structures or industries, or they may take the form of standing structures, features such as roads, historic landscapes such as those which result from extractive or other economic activities, or archival materials.

ETHNOGRAPHIC RESOURCES

Ethnographic resources are those materials important to the heritage of a particular ethnic or cultural group, such as Native Americans, African, European, or Asian immigrants.

They may include traditional resource collecting areas, ceremonial sites, topographic features, cemeteries, shrines, or ethnic neighborhoods and structures.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Federal

Cultural resources have been protected under the federal Antiquities Act since 1906 (Title 16, U.S. Code, Section 431 et seq.), with many subsequent enactments, regulations, policies, and guidelines, including standards for professional consultant qualifications. Portions of the project which may require a United States Army Corps of Engineers (USACE) 404 Permit would be regarded as an “undertaking” and therefore subject to compliance with Section 106 under the National Historic Preservation Act (NHPA). Projects licensed by the Energy Commission are reviewed to ensure compliance with the following federal laws:

National Environmental Policy Act (NEPA): Title 42, United States Code, Section 4321 et seq., requires federal agencies to consider potential environmental impacts of projects with federal involvement and to consider appropriate mitigation measures.

Federal Register 48 44739-44738, 190 (September 30, 1983); updated 62 33708-33723 (June 20, 1997). Federal Guidelines for Historic Preservation Projects. The US Secretary of the Interior has published a set of Standards and Guidelines for Archaeology and Historic Preservation. These outline the appropriate professional methods and techniques for the preservation of archaeological and historical properties. The Secretary’s standards and guidelines are used by federal agencies, such as the Forest Service, the Bureau of Land Management, and the National Park Service. The State Historic Preservation Office refers to these standards in its requirements for selection of qualified personnel and in the mitigation of potential impacts to cultural resources on public lands in California.

National Historic Preservation Act 16 USC 470, Section 106 requires federal agencies to take into account the effects of their undertakings on historic properties through consultations beginning at the early stages of project planning. Regulations revised in 1997 (36 CFR Part 800 et. seq.) set forth procedures to be followed for determining eligibility for nomination, the nomination, and the listing of cultural resources in the National Register of Historic Places (NRHP). The eligibility criteria and the process are used by federal, state and local agencies in the evaluation of the significance of cultural resources. Very similar criteria and procedures are used by the state in identifying cultural resources eligible for listing in the California State Register Historic Resources. Recent revisions to Section 106 in 1999 have emphasized the importance of Native American consultation.

- Executive Order 11593, “Protection of the Cultural Environment,” May 13, 1971 (36 Federal Register 8921) orders the protection and enhancement of the cultural environment by providing leadership, establishing state offices of historic preservation, and developing criteria for assessing resource values.

- American Indian Religious Freedom Act: Title 42, United States Code, section 1996 protects Native American religious practices, ethnic heritage sites, and land uses.
- Native American Graves Protection and Repatriation Act (1990): Title 25, United States Code, Section 3001, *et seq.* This Act defines “cultural items,” “sacred objects,” and “objects of cultural patrimony”; establishes an ownership hierarchy; provides for review; allows excavation of human remains, but stipulates return of the remains according to ownership; sets penalties; calls for inventories; and provides for return of specified cultural items.

State

The State of California also has historic preservation laws and criteria for the evaluation of cultural resources; these are largely parallel to the federal measures. Projects licensed by the Energy Commission are reviewed to ensure compliance with the following state laws:

- Public Resources Code, Section 5020.1 defines several terms, including the following:
 - (j) “Historical resource” includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.
 - (q) “Substantial adverse change” means demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired.
- Public Resources Code, Section 5024.1 establishes the California Register of Historical Resources; sets forth criteria to determine significance; defines eligible properties; and lists nomination procedures. The criteria are essentially the same as for eligibility to the NRHP, but stipulate that some properties, which may not retain sufficient integrity to meet NRHP standards, may still be eligible for the California Register.
- Title 14, California Code of Regulations, Section 4852(c) explains that a resource that has lost its historic character or appearance may still have sufficient integrity for the California Register.
- Public Resources Code, Section 5097.5 states that any unauthorized removal or destruction of archaeologic or paleontologic resources on sites located on public land is a misdemeanor. As used in this section, “public lands” means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority or public corporation, or any agency thereof.

- Public Resources Code, Section 5097.98 defines procedures for notification of discovery of Native American human remains and for the disposition of human remains and associated grave goods.
- Public Resources Code, Section 5097.99 prohibits obtaining or possessing Native American artifacts or human remains taken from a grave or cairn and sets penalties for these actions.
- Public Resources Code, Section 5097.991 states that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated.
- Public Resources Code, Section 21000, et seq., California Environmental Quality Act (CEQA). This act requires the analysis of potential environmental impacts of proposed projects and requires application of feasible mitigation measures.
- Public Resources Code, Section 21083.2 states that if a project may affect a resource that has not met the definition of an historical resource as set forth in Section 21084, then the lead agency may determine whether the project may have a significant effect on such resources. If a potential for damage to unique resources can be demonstrated, such resources must be avoided; if they can not be avoided mitigation measures shall be required. The law also discusses excavation as mitigation; discussed the costs of mitigation for several types of projects; sets time frames for excavation; defines “unique” and non-unique” archaeological resources; provides for mitigation of unexpected resources; and sets financial limitations for this section.
- Public Resources Code, Section 21084.1 indicates that a project may have a significant effect on the environment if it causes a substantial adverse change in the significance of a historic resource; the section further defines a “historic resource” and describes what constitutes a “significant” historic resource.
- CEQA guidelines, Title 14, California Code of Regulations, Section 15064.5 addresses the significance of impacts to archaeological and historical resources. Subsection (a) defines the term “historical resources.” Subsection (b) explains when a project may be deemed to have a significant effect and defines terms. Subsection (c) describes CEQA’s relevance to archaeological sites. If a resource is found to be an historical resource, Public Resources Code 21083.2 does not apply.
- CEQA Guidelines, Title 14, California Code of Regulations, Section 15064.7, “Thresholds of Significance.” This section encourages agencies to develop thresholds of significance to be used in determining potential impacts and defines the term “cumulatively significant.”
- CEQA Guidelines, Title 14, California Code of Regulations, Section 15126.4, “Consideration and Discussion of Mitigation Measures Proposed to Minimize Significant Effects.” Subsection (b) discusses impacts of maintenance, repair, stabilization, restoration, conservation, or reconstruction of a historical resource.

Subsection (b) also discusses mitigation through avoidance of damaging effects on any historical resource of an archaeological nature, preferably by preservation in place; alternatives include documentation or data recovery by scientific excavation if avoidance or preservation in place is not feasible. Data recovery must be conducted in accordance with an adopted data recovery plan.

- CEQA Guidelines, Appendix G: “Issue V: Cultural Resources” lists four questions to be answered in determining the potential for a project to impact archaeological, historical, and paleontological resources.
- California Penal Code, Section 622.5: Anyone who willfully damages an object or thing of archaeological or historic interest can be found guilty of a misdemeanor.
- California Health and Safety Code, Section 7050.5. If human remains are discovered during earth disturbing activities or construction, the project owner is required to contact the county coroner.
- Public Resources Code, Section 5097.98. If the county coroner determines that the remains are Native American, the coroner is required to contact the Native American Heritage Commission, which is then required to determine the “Most Likely Descendant” to inspect the burial and to make recommendations for treatment or disposition of the remains and any associated burial items.

Local

There are no applicable local LORS for cultural resources.

SETTING

The proposed facility will be located on an existing facility currently being annexed by the City of Redlands in San Bernardino County. The project site consists of a total of 64 acres located adjacent to the Santa Ana River. The existing facility consists of two steam boiler generating units that feed into an immediately adjacent Southern California Edison (SCE) transmission facility and substation. The two existing units utilize groundwater in cooling towers for cooling purposes and provide a nominal gross output of 66 MW each.

The proposed new facility will utilize 18.7 already hardpacked or paved acres of the site, mostly to the North of the existing facility.

The area can be best described as an industrial region with other industrial areas and a mixture of residential and commercial zones nearby. To the North of site lies the Santa Ana River, dry most of the year, which has numerous other industrial and commercial facilities along its side. Directly across the Santa Ana River is the former Norton Air Force Base, now the San Bernardino International Airport. It primarily serves as a commercial airport with large cargo planes flying in and out on a regular basis. The Santa

Ana River itself has been highly disturbed, with reinforced or concrete channel banks, numerous surface mining operations going on to the North within the river bed. To the East of the Site lie agricultural land and a water treatment facility. To the South lies agricultural land followed by the Highway -10 freeway. To the west lie commercial, light industrial and residential areas. The residential area is a small enclave to the Southwest of the facility.

IMPACTS

Given the degree of local development and the fact that the bulk of project related activities will be using existing facilities and utilities, it is unlikely that prehistoric material will be encountered during project activities. It is possible, however, that construction may encounter historical materials buried beneath the surface. Much of the current survey work was conducted along existing streets through commercial, residential, or, occasionally, agricultural areas. Fieldwork revealed that the proposed lines primarily follow multiple lane streets. A working easement of no more than 50 feet will be required to construct the proposed line. This will easily fit within the general 100-foot width of existing pavement. Both the record search and field investigations made it clear that most of the numerous previously reported resources along the proposed construction right-of-way are situated on the roadside or within the general surrounding neighborhoods. Because construction is proposed within the roadway itself, these resources will be avoided as long as the 50-foot easement is maintained.

Natural gas line construction will intersect the existing Gage Canal. Based on the contemporary shape of the canal, there probably has been surface preparation using heavy equipment prior to stabilization. Linear water conveyance resources are used to move more water from one location to another for individual, commercial, agricultural or industrial uses. They often allow the development of communities by supplying much needed water and they are critical to continued occupation. As such, these are important details of the construction of the natural gas line, artifacts associated with it, or other information that may be uncovered. The proposed natural gas line route may adversely impact portions of this site.

MITIGATION

The preferred mitigation measure is avoidance. In some cases, this can be accomplished through coordination between the archaeological/historic monitor and the construction project manager during construction. They will identify the locations of previously reported resources in the construction areas with fencing, flagging, or other barriers to insure the protection of the resources during construction.

In some cases, cultural resources cannot be avoided. To ensure that important or significant information is not lost as a result of project construction, it is recommended that an archaeological/historic monitor be present when work is undertaken at the following resources:

- P1074-61H, Old road
- SBR-7168H, Gage Canal
- P1074-28H, Water transportation
- P1074-88H, Vivienda Water Co.
- P-1074-92H, Davis Mill Ditch
- PSBR-26H, North Fork Ditch
- PSBR-85H, Water transportation

To protect these cultural resources and minimize potential impacts, the archaeological/historic monitor and construction project manager will conduct worker education meetings with construction crews to inform them of the locations of the cultural resources and instructions to preserve the resources. Issues to be addressed in the educational meetings will include parking and driving in marked areas and reporting procedure when/if artifacts are encountered.

When previously undiscovered cultural materials are encountered, the construction project manager will immediately remove equipment and personnel from the location of the material, flag, rope, or place barriers in the area to prevent access, and notify the archaeological/historic monitor. The archaeological/historic monitor will examine the extent, nature, and depth of the deposits.

If the find is determined by the archaeological/historic monitor not to be an important archaeological resource, then construction will resume. If the find is determined by the archaeological/historic monitor to be an important archaeological resource that requires further treatment, the resource shall be protected while the State Historic Preservation Officer, the CEC, and the archaeological/historic monitor determine what treatment measures will be appropriate to mitigate adverse impacts.

The archaeological/historic monitor and State Historic Preservation Officer will develop a mitigation plan for the find, taking care to schedule events to allow construction to resume with minimal delays. The field portion of implementation of the plan shall be considered complete when the field data collection phase of the mitigation plan is finished. At that point, the archaeological/historic monitor shall notify the construction project manager that construction may resume and shall arrange for analysis, write up, and ultimate curation of materials.

In the event that testing or data recovery excavations of a resource with a prehistoric or an ethnographic component, mitigation plans should include a Native American monitor to ensure that the interests of local Native American communities are addressed. Selection of the appropriate Native American monitor should be made in coordination with the Native American Heritage Commission and the Native American monitor should

coordinate with the archaeological monitor in the preparation of mitigation plans. The monitor will be retained either directly by the applicant or through the subconsultant doing the archaeological monitoring.

If human remains are encountered during construction, the applicant will contact the County Coroner who will examine the find. If it is determined to be Native American then the Coroner must notify the Native American Heritage Commission who will determine the most likely descendent. The Native American Heritage Commission will notify the most likely descendent and solicit recommendations for treatment.

Persons directing the archaeological monitoring will meet the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation for Archaeology, which state (36 CFR 61, Appendix A):

The minimum professional qualifications in archaeology are a graduate degree in archaeology, anthropology or closely related field plus:

- (1) At least one year full-time professional experience or equivalent specialized training in archaeological research, administration or management;
- (2) At least four months of supervised field and analytic experience in general North American archaeology;
- (3) Demonstrated ability to identify and record features and material scatters in the field; and
- (4) Demonstrated ability to design site evaluation and mitigation plans.

Through the use of the above mitigation measures, and through professional application of archaeological monitoring, the significance of impacts to important cultural resources will be lowered to a non-significant level.

FACILITY CLOSURE

No abandonment/closure impacts were identified related to cultural resources because the project site and related linear facilities will have been previously disturbed during construction.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions:

By following the mitigation measures outlined in this section compliance with all LORS and mitigation of all significant impacts will be assured.

Recommendations:

The fourteen standard cultural resource conditions should be implemented.

MVPP's CONDITIONS ANALYSIS

MVPP is a natural gas combined cycle project very similar to previously permitted projects. Thus, MVPP requires the same 14 standard conditions as have all previously permitted projects. The disposition of all past conditions is presented here. There are no unique circumstances requiring any new or innovative conditions.

DISPOSITION OF STANDARD CONDITIONS

STAN-CUL-1: Applicable

Requires that the project owner shall provide the CEC CPM with the name(s) and qualifications of its designated cultural resource specialist and mitigation team. MVPC agrees with these requirements are needed and stipulates to this condition.

STAN-CUL-2: Applicable

Requires project owner to provide maps and drawings for the project. MVPC stipulates to this condition.

STAN-CUL-3: Applicable

Requires designed cultural specialist to submit a draft Cultural Resources Monitoring and Mitigation Plan. MVPC agrees with this needed requirement and stipulates to the condition.

STAN-CUL-4: Applicable

Requires the pre-reconnaissance and staking in all areas effected by construction and operation of the project. Upon request by the CPM, the project owner shall provide specified weekly summaries. MVPC stipulates to this condition.

STAN-CUL-5: Applicable

Requires the designated cultural resource specialist to prepare employee training program. Program to be submitted to the CEC CPM. Program may be combined with other training programs prepared for biological resources, paleontological resources, hazardous materials, or any other area of interest or concern. MVPC stipulates to this condition.

STAN-CUL-6: Applicable

Requires cultural resource specialist to provide training to all new employees who operate working ground-disturbing equipment. MVPC stipulates to this condition.

STAN-CUL-7: Applicable

Requires project owner to provide designated cultural specialist with a current schedule of weekly-anticipated project activity and map indicating the area(s) where construction will occur. MVPC stipulates to this condition.

STAN-CUL-8: Applicable

Requires that the designated cultural resource specialist be on site all times during construction –related grading, excavation, trenching an/or auguring occurs in area of previously recorded archeological sites. MVPC stipulates to this condition.

STAN-CUL-9: Applicable

Requires designated cultural resource specialist or delegated monitor shall have the authority to halt or redirect construction if potentially significant previously unknown cultural resource sites or materials are encountered during project-related grading, auguring, excavation, and/or trenching. MVPC stipulates to this condition.

STAN-CUL-10: Applicable

Requires the project owner shall ensure the recovery, preparation for analysis, identification and inventory, the preparation for curation and the delivery for curation of all significant cultural resource materials encountered and collected during mapping and mitigation activities. MVPC stipulates to this condition.

STAN-CUL-11: Applicable

Requires preparation of a Preliminary Cultural Resources Report following completion of data recovery and site mitigation work. MVPC stipulates to this condition.

STAN-CUL-12: Applicable

Requires project owner to ensure preparation of a Final Cultural Resources Report following completion of data recovery and site mitigation work. MVPC stipulates to this condition.

STAN-CUL-13: Applicable

Project owner to provide the CPM with an original copy of the Final Cultural Resources Report and other copies necessary to submit to the public institution receiving the recovered data and materials for curation. MVPC stipulates to this condition.

STAN-CUL-14: Applicable

Requires that within 30 days following the Final Cultural Resources Report with the CPM, the project owner shall deliver for curation all cultural resource materials collected during data recovery and mitigation for the project. MVPP stipulates to this condition.

DISPOSITION OF CATEGORICAL CONDITIONS

CAT-CUL-1: Not needed

This condition was designed to ensure that the designated cultural resource specialist obtains and maintains a current BLM Archaeological Resource Use Permit to gain access to lands managed by the BLM or other federal agencies. This condition is not needed.

DISPOSITION OF UNIQUE CONDITIONS

UNI-CUL-1: Not needed

This condition addresses cut and cover construction rather than directional drilling used to construct the natural gas pipeline across the Los Medanos Wasteway. The project owner shall consult with the US Bureau of Reclamation and the CPM regarding compliance with Section 106 of the National Historic Preservation Act for such cut and cover practices. The project owner shall implement any cultural resources mitigation measures required by the US Bureau of Reclamation and the CPM as a result of such consultation. This requirement is applicable to the Los Medanos project and is not required for the MVPP.

UNI-CUL-2: Not needed

This condition requires the project owner to include in the facility closure plan, a description regarding facility closure activities potential to impact cultural resources. MVPC has a facility closure plan for its existing facility, which will be updated. This condition is not needed

MVPC'S STIPULATED CONDITIONS OF CERTIFICATION

MVPC stipulates to the following conditions:

CUL-1: Curation of Significant Cultural Resource Materials

The project owner shall ensure the recovery, preparation for analysis, identification and inventory, the preparation for curation and the delivery for curation of all significant cultural resource materials encountered and collected during mapping and mitigation activities.

Verification:

The project owner shall maintain in its compliance files, copies of signed contracts or agreements with the designated cultural rescue specialist and other qualified research specialists. These specialists will ensure the necessary recovery, preparation for analysis, identification and inventory, and preparation for curation of all significant cultural resource materials collected during monitoring, data recovery, mapping, and mitigation activities for the project. The project owner shall keep these files on-site and available for periodic audit by the CPM, for a period of at least two years after completion of the approved Final Cultural Resources Report.

CUL-2: Preliminary Cultural Resources Report

The project owner shall ensure preparation of a Preliminary Cultural Resources Report following completion of data recovery and site mitigation work.

Protocol:

The proposed scope of work shall include (but not be limited to): a. discussion of any analysis to be conducted on recovered cultural resource materials; b. discussion of possible results and findings, c. proposed research questions which may be answered or raised by analysis of the data recovered from the project; and d. an estimate of the time needed to complete the analysis of recovered cultural resource materials and prepare the Cultural Resources Report.

Verification:

The project owner shall ensure that the designated cultural resources specialist prepares the proposed scope of work within 90 days following completion of the data recovery and site mitigation work. Within 7 days after completion of the proposed scope of work, the project owner shall submit it to the CPM for review and written approval.

CUL-3: Final Cultural Resources Report

The project owner shall ensure preparation of a Final Cultural Resources Report following completion of data recovery and site mitigation work.

Protocol:

The Cultural Resources Report shall include (but not be limited to) the following for all projects:

- 1) description of pre-project literature search, surveys, and any testing activities;
- 2) maps of showing areas surveyed or tested;
- 3) description of any monitoring activities;
- 4) maps of any areas monitored; and,
- 5) conclusions and recommendations.

For projects in which cultural resources were encountered, include the items specified under a of CUL-2 and also provide: 1) site and isolate records and maps; 2) description of testing for, and determinations of, significance and potential eligibility; and 3) research questions answered or raised by the data from the project.

For projects regarding which cultural resources were recovered, include the items specified under a and b of CUL-2 and also provide:

- 1) descriptions (including drawings and/or photos) of recovered cultural materials;
- 2) results and findings of any special analyses conducted on recovered cultural resource materials;
- 3) an inventory list of recovered cultural resource materials; and,
- 4) the name and location of the public repository receiving the recovered cultural resources for curation.

Verification:

The project owner shall ensure that the designated cultural resources specialist completes the Cultural Resources Report within 90 days following completion of the analysis of the recovered cultural materials. Within 7 days after completion of the report, the project owner shall submit the Cultural Resources Report to the CPM for review and written approval.

CUL-4: Provide Final Cultural Resources Report to CPM

The project owner shall provide the CPM with an original copy of the Final Cultural Resources Report and other copies necessary to submit to the public institution receiving the recovered data and materials for curation.

Protocol:

The copies of the Cultural Resource Report to be sent to the curating repository, the SHPO, and the regional information center(s) shall include the following (based on the applicable scenario (a, b or c) set forth CUL-2: a. originals or original-quality copies of all text; b. originals of any topographic maps showing site and resource locations; c. originals or original-quality copies of drawings of significant or diagnostic cultural resource materials found during pre-construction surveys or during project-related monitoring, data recovery, or mitigation; and d. photographs of the site(s) and the various cultural resource materials recovered during project monitoring and mitigation and

subjected to post-recovery analysis and evaluation. The project owner shall provide the curating repository with a set of negatives for all of the photographs.

Verification:

Within 30 days after receiving approval of the Cultural Resources Report, the project owner shall provide to the CPM documentation that the report has been sent to the public repository receiving the recovered data and materials for curation, the SHPO, and the appropriate archaeological information center(s). For the life of the project the project owner shall maintain in its compliance files copies of all documentation related to the filing of the CPM-approved Cultural Resources Report with the public repository receiving the recovered data and materials for curation, the SHPO, and the appropriate archaeological information center(s).

CUL-5: Delivery of Collected Cultural Materials

Within 30 days following the Final Cultural Resources Report with the CPM, etc., the project owner shall deliver for curation all cultural resource materials collected during data recovery and mitigation for the project.

Verification:

The project owner shall ensure that all recovered cultural resource materials are delivered for curation within 30 days after providing the CPM-approved Cultural Resource Report to the public repository receiving the recovered data and materials, to the SHPO, and to the appropriate archaeological information center(s).

For the life of the project the project owner shall maintain in its project history or compliance files, copies of signed contracts or agreements with the public repository to which the project owner has delivered for curation all cultural resource materials collected during data recovery and mitigation for the project.

CUL-6: Designated Cultural Resource Specialist and Mitigation Team Members

Prior to construction, the project owner shall provide the CEC CPM with the name(s) and qualifications of its designated cultural resource specialist and mitigation team members.

Protocol:

a. The statement of qualifications for the designated cultural resource specialist shall include all information needed to demonstrate that the specialist meets the minimum qualifications specified in the US Secretary of Interior Guidelines, as published by the State Office of Historic Preservation (1983). The minimum qualifications include the following:

1. a graduate degree in anthropology, archaeology, California history, cultural resource management, or a comparable field;
2. at least three years of archaeological resource mitigation and field experience in California; and,
3. at least one year of experience in each of the following areas:
 - a. leading archaeological resource field surveys;
 - b. leading site and artifact mapping, recording, and recovery operations;
 - c. marshalling and use of equipment necessary for cultural resource recovery and testing;
 - d. preparing recovered materials for analysis and identification;
 - e. determining the need for appropriate sampling and/or testing in the field and in the lab;
 - f. directing the analyses of mapped and recovered artifacts;
 - g. completing the identification and inventory of recovered cultural resource materials; and,

- h. preparing appropriate reports to be filed with the receiving curation repository, the SHPO, all appropriate regional archaeological information center(s).

The statement of qualifications for the designated cultural resource specialist shall include:

1. a list of specific projects on which the specialist has previously worked;
2. the role and responsibilities of the specialist for each project listed; and,
3. the names and phone numbers of contacts familiar with the specialist's work on these referenced projects.

Verification:

At least 90 days prior to the start of project construction, the project owner shall submit the name and statement of qualifications of its designated cultural resource specialist to the CPM for review and written approval. At least 10 days but no more than 30 days prior to the start of construction, the project owner shall confirm in writing to the CPM that the approved designated cultural resource specialist will be available at the start of construction. And, furthermore, that the cultural resource specialist is prepared to implement the cultural resource Conditions of Certification. At least 10 days prior to the termination or release of a designated cultural resource specialist, the project owner shall obtain CPM approval of the replacement specialist by submitting to the CPM the name and resume of the proposed new designated cultural resource specialist.

CUL-7: Provision of Maps and Drawings

Prior to construction, the project owner shall provide the designated cultural specialist and the CPM with maps and drawings for the project.

Verification:

At least 75 days prior to the start of construction on the project and linear facilities, the project owner shall provide the designated cultural resource specialist and the CPM with final drawings and site layouts for each project facility and maps at appropriate scale(s) for all areas potentially affected by project construction. If the designated cultural resource specialist requests enlargements or strip maps for linear facility routes, the project owner shall also provide a set of these maps to the CPM at the same time that they are provided to the specialist.

CUL-8: Draft Cultural Resources Monitoring and Mitigation Plan

Prior to construction, the designated cultural specialist shall prepare a draft Cultural Resources Monitoring and Mitigation Plan. The Cultural Resources Monitoring and Mitigation Plan shall include, but not be limited to, the following elements and measures:

- a. A proposed research design that includes a discussion of questions that may be answered by the mapping, data and artifact recovery conducted during monitoring and mitigation activities, and by the post-construction analysis of recovered data and materials.
- b. A discussion of the implementation sequence and the estimated time frames needed to accomplish all project-related tasks during the pre-construction, construction, and post-construction analysis phases of the project.
- c. Identification of the person(s) expected to perform each of the tasks and description of the mitigation team organizational structure and the inter-relationship of team roles and responsibilities. Specification of the qualifications of any professional team members.
- d. A discussion of the need for Native American observers or monitors, the procedures to be used to select them, the areas or post-mile sections where they will be needed, and their role and responsibilities.

- e. A discussion of measures such as flagging or fencing, to prohibit or otherwise restrict access to sensitive resource areas that are to be avoided during construction and/or operation, and identification of areas where these measures are to be implemented. The discussion shall address how these measures will be implemented prior to the start of construction and how long they will be needed to protect the resources from project-related effects.
- f. A discussion of where monitoring of project construction activities is deemed necessary by the designated cultural resource specialist. The specialist will determine the size or extent of the areas where monitoring is to occur and will establish the percentage of the time that the monitor(s) will be present. The areas to be monitored shall include the power plant site, the construction lay-down area, the natural gas pipeline route, and the 230 kV electric transmission line route.
- g. A discussion of the requirement that all cultural resources encountered will be recorded and mapped (may include photos) and all significant or diagnostic resources will be collected for analysis and eventual curation into a retrievable storage collection in a public repository or museum that meets the US Secretary of Interior standards and requirements for the curation of cultural resources.
- h. A discussion of the availability and the designated specialist's access to equipment and supplies necessary for site mapping, photographing, and recovering any cultural resource materials encountered during construction.
- i. Identification of the public institution that has agreed to receive any data and cultural resources recovered during project-related monitoring and mitigation work. Discussion of any requirements, specifications, or funding needed for the materials to be delivered for curation and how they will be met. Also include the name and phone number of the contact person at the institution.

Verification:

At least 60 days prior to the start of construction on the project, the project owner shall provide the Cultural Resources Monitoring and Mitigation Plan, prepared by the designated cultural resource specialist, to the CPM for review and written approval.

CUL-9: Pre-construction Reconnaissance and Staking

Prior to construction, the project owner shall conduct a pre-construction reconnaissance and staking in all areas expected to be affected by construction and operation of the project and its associated linear facilities.

Verification:

Throughout the project construction period, the project owner shall ensure that the daily log and weekly summaries are available for periodic audit by the CPM. Upon request by the CPM, the project owner shall provide specified weekly summaries to the CPM.

CUL-10: Employee Training Program

Prior to construction, the designated cultural resource specialist shall prepare an employee training program. The program shall be submitted to the CEC CPM. The training program shall discuss the potential to encounter cultural resources in the field, the sensitivity and importance of these resources, and the legal obligations to preserve and protect such resources.

The training program shall also include the set of resource reporting procedures and work curtailment procedures that workers are to follow if previously unknown cultural resources are encountered during project activities. The training program shall be presented by the designated cultural resource specialist or qualified individual(s) approved by the CPM and may be combined with other training programs prepared for biological resources, paleontological resources, hazardous materials, or any other areas of interest or concern.

Verification:

At least 60 days prior to the start of construction on the project, the project owner shall submit to the CPM for review and written approval, the proposed employee training program, the set of reporting procedures, and the work curtailment procedures that the workers are to follow if previously unknown cultural resources are encountered during construction. The project owner shall provide the name and resume of the individual(s) performing the training.

CUL-11: Training Regarding Operation of Ground Disturbing Equipment

Prior to and throughout construction, the cultural resource specialist shall provide training to all new employees, project managers, construction supervisors, and workers who operate ground-disturbing equipment.

Verification:

Within 7 days after the start of construction, the project owner shall provide the CPM with documentation that the designated cultural resources trainer(s) has/have provided to all project managers, construction supervisors, and workers hired before the start of construction the CEC-approved cultural resources training and the set of reporting and work curtailment procedures.

In each Monthly Compliance Report after the start of construction, the project owner shall provide the CPM with documentation that the designated cultural resource trainer(s) has/have provided to all project managers hired in the month to which the report applies the CPM-approved cultural resources training and the set of reporting and work curtailment procedures.

CUL-12: Weekly Project Activity Report to Designated Cultural Resource Specialist

Throughout the project construction period, the project owner shall provide the designated cultural resource specialist with a current schedule of anticipated weekly project activity and a map indicating the area(s) where construction will occur.

Verification:

At least 10 days prior to the start of construction involving ground-disturbing activities, and in each monthly compliance report, the project owner shall provide the CPM with copies of the schedules and maps provided to the designated cultural resource specialist. The project owner shall notify the CPM when all ground disturbing activities, including landscaping, are completed.

CUL-13: Presence of the Designated Cultural Resource Specialist On-Site

The designated cultural resource specialist shall be present at the construction site at all times when construction-related grading, excavation, trenching an/or auguring occurs in areas of previously recorded archaeological sites.

Protocol:

If the designated cultural resource specialist determines that full-time monitoring is not necessary in certain portions of the project area or along portions of the linear facility routes, the designated specialist shall notify the project owner and the CPM of the changes. The designated cultural resource specialist shall use milepost markers and boundary stakes placed by the project owner to identify areas where monitoring is being reduced or is no longer deemed necessary.

Verification:

Throughout the project construction period the project owner shall include in the Monthly Compliance Reports to the CPM copies of the weekly summary reports prepared by the designated cultural resource specialist regarding project-related cultural resource monitoring.

CUL-14: Encounter of Sensitive Resources

The designated cultural resource specialist or their delegated monitor shall have the authority to halt or redirect construction if potentially significant previously unknown cultural resource sites or materials are encountered during project-related grading, auguring, excavation, and/or trenching. If such resources are found and the specialist determines that they are not significant, the specialist may allow construction to resume. The project owner shall notify the CPM of the find as set forth in the Verification section. If such resources are found and the specialist determines that they are or may be significant, the halting or redirection of construction shall remain in effect until:

- a. the designated cultural resources specialist has notified the CPM of the find and the work stoppage;
- b. the specialist, the project owner, and the CPM have conferred and determined what, if any, data recovery or other mitigation is needed; and,
- c. any necessary data recovery and mitigation has been completed.

The designated cultural resources specialist, the project owner, and the CPM shall confer within five working days of the notification of the CPM to determine what, if any, data recovery or other mitigation is needed.

If data recovery or other mitigation measures are required, the designated cultural resource specialist and team members shall monitor construction activities and implement data recovery and mitigation measures, as needed.

All required data recovery and mitigation shall be completed expeditiously unless all parties agree to additional time.

Verification:

At least 30 days prior to the start of construction, the project owner shall provide the CPM with a letter confirming that the designated cultural resources specialist has the authority to halt construction activities in the vicinity of a cultural resource find.

For any cultural resource encountered that the specialist determines is or may be significant, the project owner shall notify the CPM as soon as possible.

For any cultural resource encountered that the specialist determines is not significant, the project owner shall notify the CPM within 72 hours after the find.

UNRESOLVED ISSUES IN CULTURAL RESOURCES

MVPC is not aware of any cultural resources issues requiring further exploration, analysis or mitigation. MVPC submits the above-stipulated conditions believing that the area of cultural resources management will be fully addressed.

SOCIOECONOMIC RESOURCES

This section presents a comprehensive analysis of Socioeconomic Resources, both in previously permitted projects and in the case of the Mountainview Power Plant (MVPP)¹⁵. Previously permitted projects are analyzed for their standard, categorical and unique conditions as well as what triggered each categorical and unique condition. Next, MVPP is juxtaposed with past projects allowing necessary conditions to be identified. The juxtaposition begins by a thorough review of applicable laws, ordinances, regulates and standards (LORS). Then, the setting of the MVPP in the context of socioeconomic resources is presented. And, finally, Mountainview Power Company (MVPC) stipulates to conditions providing required mitigation and LORS compliance. The section closes by identifying any outstanding issues not resolved by the stipulated conditions.

OVERVIEW OF SOCIOECONOMIC CONDITIONS

The issue area of socioeconomic resources involves assessing socioeconomic impact and LORS compliance issues associated with constructing and operating a power plant. Two standard conditions were imposed in all five previously permitted projects. The second “standard” condition is essentially a varied condition or set of conditions present in every past project designed to ensure that any unpaid or unresolved fees at time of final decision, pertaining to schools or fire services, are resolved and paid for by project owner.

PAST SOCIOECONOMIC CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-SOC-1	Employment Recruiting Procedures and Procurement	Yes
STAN-SOC-2	Statutory School Facility Fees and Funding for Fire Facilities	Yes

STANDARD SOCIOECONOMIC CONDITIONS

STAN-SOC-1: Employment Recruiting Procedures and Procurement

[LM-SOC-1]; [SPP-SOC-1]; [DEC-SOC-1]; [HD-SOC-1]

Standard Description of Condition:

Project Owner and its contractors and subcontractors shall recruit employees and procure materials and supplies within the County first unless

- To do so will violate federal and / or state statutes;

¹⁵ As in all the sections of this document, abbreviations are used for the last five permitted projects before the California Energy Commission. Those abbreviations are:

SPP = Sutter Power Plant

DEC = Delta Energy Center

LM = Los Medanos Energy Center

HD = High Desert

LP = La Paloma

- The materials and / or supplies are not available; or
- Qualified employees for specific jobs or positions are not available ; or
- There is a reasonable basis to hire someone for a specific position from outside the local area.

Protocol:

Condition has no protocol.

Verification:

At least thirty (30) days prior to the start of construction, the project owner shall submit to the California Energy Commission (CEC) Compliance Project Manager (CPM) copies of contractor, subcontractor, and vendor solicitations and guidelines stating hiring and procurement requirements and procedures. In addition, the project owner shall notify the CEC in each Monthly Compliance Report of the reasons for any planned procurement of materials or hiring outside the local regional area that will occur during the next two months. The CEC and CPM shall review and comment on the submittal as needed.

STAN-SOC-2: Statutory School Facility Fees and Funding for Fire Facilities

[LM-SOC-2]; [DEC-SOC-2]; [HD-SOC-2]; [SPP-SOC-1]; [LP-SOC-1 &2]

Standard Description of Condition:

Project Owner shall reach agreement with city and county and pay statutory or agreed school facility development fee and statutory or agreed fire facilities fees or equipment.

Protocol:

Condition has no protocol.

Verification:

At least 30 days prior to the start of construction, the project owner shall submit to the CPM a copy of the agreement with the appropriate authority which states the amount of fees and timing of payment the project owner will provide to cover project-specific impacts associated with hazardous materials handling and fire protection.

SOCIOECONOMIC ANALYSIS FOR MVPP

INTRODUCTION

This section discusses the potential impacts of the construction and operation of the proposes MVPP on local communities, community resources, and public services, pursuant to Title 14, California Code of Regulations, Section 15131. MVPC understands the California Energy Commission (Energy Commission) staff socioeconomic impact analysis evaluates the project induced changes on community services and/or infrastructure and related community issues such as environmental justice and facility closure.

LAWS, ORDINANCES, REGULATIONS, AND STADARDS (LORS)

Federal

No applicable Federal LORS.

State

California Government Code Section 65995-65997 (amended by 5B 50), states that public agencies may not impose fees, charges or other financial requirements to offset the

cost for school facilities. However, the code does include provisions for levies against development projects near schools. The administering agency for implementing school impact fees in the project area is the Redlands Unified School District.

Local

The project site is presently located in an unincorporated area of San Bernardino County. However, the City of Redlands is in the process of annexation. No applicable County of San Bernardino LORS were identified related to Socioeconomics.

City of Redlands Development Fee Policy 1A.10 - The cost of infrastructure required to mitigate the effects of new development shall be paid by that new development. All development projects are required to pay development fees to cover 100 percent of their pro rata share of the cost of any public infrastructure, facility or service. The City Council sets and determines fees based on appropriate cost-benefit analyses as required by the provisions of California law. Presently, the project does not require water or sewer services from the City of Redlands or San Bernardino County. Other development fees will be negotiated between MVPC and the City based on the impacts.

SETTING

The proposed facility will be located on an existing facility currently being annexed by the City of Redlands in San Bernardino County. The project site consists of a total of 64 acres located adjacent to the Santa Ana River. The existing facility consists of two steam boiler generating units that feed into an immediately adjacent Southern California Edison (SCE) transmission facility and substation. The two existing units utilize groundwater in cooling towers for cooling purposes and provide a nominal gross output of 66 MW each. The proposed new facility will utilize 18.7 already hardpacked or paved acres of the site, mostly to the North of the existing facility.

The area can be best described as an industrial region with other industrial areas and a mixture of residential and commercial zones nearby. To the North of site lies the Santa Ana River, dry most of the year, which has numerous other industrial and commercial facilities along its side. Directly across the Santa Ana River is the former Norton Air Force Base, now the San Bernardino International Airport. It primarily serves as a commercial airport with large cargo planes flying in and out on a regular basis. The Santa Ana River itself has been highly disturbed, with reinforced or concrete channel banks, numerous surface mining operations going on to the North within the river bed.

To the East of the Site lie agricultural land and a water treatment facility. To the South lies agricultural land followed by the Highway -10 freeway. To the west lie commercial, light industrial and residential areas. The residential area is a small enclave to the Southwest of the facility.

IMPACTS

The MVPP' AFC, Vol.1 January 2000), socioeconomic section regarding potential impacts to community services and infrastructure (i.e., employment, housing, schools,

utilities, emergency and other services), and environmental justice demonstrates that MVPP fits with existing land uses, will pay for its share of any municipal services it benefits from, and actually complements existing land values.

Existing Local Procurement

Currently MVPC procures all products and services locally that are available at competitive prices. This will continue even when new the facility is built.

Existing Local Procurement

Currently, MVPC hires administrative staff from the local labor pool. MVPC will continue to hire exempt employees, not subject to labor agreement, from the region. MVPC will hire all employees under the labor agreement pursuant to its hiring procedures.

MITIGATION

There are no significant impacts on socioeconomic, therefore no mitigation measures are proposed.

Cumulative Impacts

Cumulative impacts were assessed by researching other large-scale construction projects in the project area, where overlapping construction schedules would create a demand for workers that could not be met by labor in the four-county area. Based on discussions with local planning agencies, there are no large-scale construction projects identified within the project area that could create potentially significant impacts to the socioeconomic of the project area. Similarly, there were no cumulative impacts from the operation phase of the power plant, as most permanent personnel would be from the four-county area and would not likely relocate. As a result, there appear to be no cumulative operation impacts on socioeconomic due to the project.

FACILITY CLOSURE

Planned permanent closure impacts will be incorporated into the facility closure plan and evaluated at the end of the power economic operation.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

MVPC finds that the MVPP will not cause a significant adverse impact on the affected area's housing, schools, police, emergency services, hospitals, utilities and employment. The proposed conditions of certification ensure compliance with LORS.

Recommendations

MVPC recommends that MVPP be approved and that the Commission adopt the below stipulated proposed conditions of certification.

MVPP's CONDITIONS ANALYSIS

MVPP is a natural gas combined cycle project very similar to previously permitted projects. Thus, MVPP requires the same two standards socioeconomic conditions as have all previously permitted projects. The disposition of all past conditions is presented here. There are no unique circumstances requiring any new or innovative conditions.

DISPOSITION OF STANDARD CONDITIONS

STAN-SOCIO-1: Applicable

Requires project owner to recruit and procure in same county. MVPP agrees in principle with and stipulates to this condition as modified to accommodate a final labor agreement.

STAN-SOCIO-2: Applicable

Requires project owner to resolve and pay any and all required or agreed upon fees or costs for schools or fire protection services. MVPP has executed a development agreement which specifics all required fees for COR service. Additionally, MVPP is located in the IVDD portion of Norton, which designates distribution of taxation fees. This condition as drafted below is appropriate to MVPP, and this MVPC agrees to and stipulates to it.

MVPC'S STIPULATED CONDITIONS OF CERTIFICATION

Pursuant to the above analysis, two conditions, all standard are required to ensure LORS compliance and impact mitigation. Accordingly, MVPC stipulates to the following conditions:

SOCIO-1: Employment Recruiting Procedures

Project Owner and its contractors and subcontractors shall recruit employees and procure materials and supplies within the County first unless

- To do so will violate federal and / or state statutes;
- The materials and / or supplies are not available; or
- Qualified employees for specific jobs or positions are not available ; or

There is a reasonable basis to hire someone for a specific position from outside the local area, which shall include compliance with negotiated labor agreements.

Verification:

At least thirty (30) days prior to the start of construction, the project owner shall submit to the California Energy Commission (CEC) Compliance Project Manager (CPM) copies of contractor, subcontractor, and vendor solicitations and guidelines stating hiring and procurement requirements and procedures. In addition, the project owner shall notify the CEC in each Monthly Compliance Report of the reasons for any planned procurement of materials or hiring outside the local regional area that will occur during the next two months. The CEC and CPM shall review and comment on the submittal as needed.

SOCIO-2: Statutory School Facility Fees and Funding for Fire Facilities

Project Owner shall reach agreement with City of Redlands and pay statutory or agreed school facility development fee and statutory or agreed fire facilities fees or equipment.

Verification:

At least 30 days prior to the start of construction, the project owner shall submit to the CPM a copy of the agreement with the appropriate authority which states the amount of fees and timing of payment the project owner will provide to cover project-specific impacts associated with hazardous materials handling and fire protection.

UNRESOLVED ISSUES IN SOCIOECONOMIC RESOURCES

MVPC is not aware of any socioeconomic resources issues requiring further exploration, analysis or mitigation. MVPC submits the above-stipulated conditions believing that the area of socioeconomic resources will thus be fully addressed.

BIOLOGICAL RESOURCES

This section presents a comprehensive analysis of Biological Resources issues, both in previously permitted projects and in the case of the Mountainview Power Plant (MVPP)¹⁶. Previously permitted projects are analyzed for their standard, categorical and unique conditions as well as what triggered each categorical and unique condition. Next, MVPP is juxtaposed with past projects allowing necessary conditions to be identified. The juxtaposition begins by a thorough review of applicable laws, ordinances, regulations and standards (LORS). Then, the setting of the MVPP in the context of biological resources is presented. And, finally, Mountainview Power Company (MVPC) stipulates to conditions providing required mitigation and LORS compliance. The section closes by identifying any outstanding issues not resolved by the stipulated conditions.

OVERVIEW OF BIOLOGICAL RESOURCES ISSUE AREA

The issue area of Biological Resources involves assessing a power plant's potential impacts on biological resources, determining needed mitigation and LORS compliance issues, and establishing project conditions necessary for such mitigation or LORS compliance. When sensitive habitat, endangered, threatened or otherwise listed species may be impacted, the CEC relies upon evaluations by other agencies such as California Department of Fish and Game, and the United States Fish and Wildlife Service. Because of the unique circumstances and characteristics of each project's biological surroundings and impacts, there have been many categorical conditions and a few unique conditions imposed upon the previously permitted projects. There are also four standard conditions present in all five projects.

PAST BIOLOGICAL CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-BIO-1	Approved Designated Biologist	Yes
STAN-BIO-2	Designated Biologist Duties	Yes
STAN-BIO-3	Utilize Designated Biologist	Yes
STAN-BIO-4	Implementation of Worker Environmental Awareness Program	Yes
CAT-BIO-1	Mitigation to Avoid Impacts to Wetlands	No

¹⁶ As in all the sections of this document, abbreviations are used for the last five permitted projects before the California Energy Commission. Those abbreviations are:

SPP = Sutter Power Plant
DEC = Delta Energy Center
LM = Los Medanos Energy Center
HD = High Desert
LP = La Paloma

CAT-BIO-2	Compensation /Mitigation for Permanent Lost of Habitat	No
CAT-BIO-3	Mitigation Measures for Listed Species	No
CAT-BIO-4	USFWS Biological Opinion	Yes
CAT-BIO-5	Measures to Mitigate Impacts to Migratory Birds	No
CAT-BIO-6	Streambed Alteration Agreement	Yes
CAT-BIO-7	Approval of BRMIMP	Yes
UNI-BIO-1	Obtain Incidental Take Permit from CDFG	No
UNI-BIO-2	Memorandum of Understanding with California Department of Fish and Game	No
UNI-BIO-3	Written Report after Construction Regarding BRMIMP	No
UNI-BIO-4	Natural Gas Pipeline Builder must Comply with CEC Conditions	No
UNI-BIO-5	Comprehensive Mitigation Measures for Biological Resources	No

STANDARD BIOLOGICAL RESOURCES CONDITIONS

STAN-BIO-1: Approved Designated Biologist

[LM-BIO-1]; [SPP-BIO-1&2]; [LP-BIO-2]; [DEC-BIO-1&2]; [HD-BIO-1]

Description of Standard Condition:

Construction site and/or ancillary facilities preparation shall not begin until an Energy Commission Compliance Project Manager (CPM) approved designated biologist is available on site. The CPM approved designated biologist shall perform the following duties: 1) advise the project owner's supervising construction or operations engineer on the implementation of the biological resource Conditions of Certification; 2) supervise or conduct mitigation, monitoring, and other biological resource compliance efforts, particularly in areas requiring avoidance or containing sensitive biological resources, such as wetlands and special statues species; and 3) notify the project owner and the CPM of any non-compliance with any Condition.

Protocol:

The designated biologist must meet the following minimum qualifications:

- A bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field,
- Three years of experience in field biology or current certification of a nationally recognized biological society, such as the Ecological
- Society of America or The Wildlife Society,
- One year of field experience with resources found in or near the project area, and
- Ability to demonstrate to the satisfaction of the CPM the appropriate education and experience for the biological resource tasks that must be addressed during project construction and operation.

If the CPM determines the proposed designated biologist to be unacceptable, the project owner shall submit another individual's name and qualifications for consideration. If the approved designated biologist needs to be replaced, the project owner shall obtain approval of a new designated biologist by submitting to the CPM the name, qualifications, address, and telephone number of the proposed replacement. No disturbance will be allowed in any designated sensitive area(s) until the CPM approves a new designated biologist and that designated biologist is on site.

Verification:

At least 30 days prior to the start of surface disturbing activities at the project site and/or at ancillary facilities, the project owner shall submit to the CPM for approval, the name, qualifications, address, and telephone number of the individual selected by the project owner as the designated biologist. If a designated biologist is replaced, the information on the proposed replacement as specified in the condition must be submitted in writing to the CPM.

If the project owner is not in compliance with any aspect of this condition, the CPM will notify the project owner of making this determination within 14 days of becoming aware of the existence of any noncompliance. Until the project owner corrects any identified problem, construction activities will be halted in areas specifically identified by the CPM or designee as appropriate to assure the potential for significant biological impacts is avoided.

For any necessary corrective action taken by the project owner:

- The CPM shall make a determination of success or failure of such action after receipt of notice that corrective action is completed, or
- The CPM shall notify the project owner that coordination with other agencies will require additional time before a determination can be made.

STAN-BIO-2: Designated Biologist Duties

Description of Standard Condition:

[LM-BIO-2]; [SPP-BIO-2]; [LP-BIO-2]; [DEC-BIO-2]; [HD-BIO-2]

CPM approved designated biologist shall perform the following duties: 1) advise the project owner's supervising construction or operations engineer on the implementation of the biological resource Conditions of Certification; 2) supervise or conduct mitigation, monitoring, and other biological resources, such as wetlands and special statutes species; and 3) notify the project owner and the CPM of any non-compliance with any Condition.

Protocol:

Condition has no protocol.

Verification:

The designated biologist shall maintain written records of the tasks described above, and summaries of these records shall be submitted along with the Monthly Compliance Reports to the CPM.

STAN-BIO-3: Utilize Designated Biologist

[LM-BIO-3]; [SPP-BIO-3]; [LP-BIO-4]; [DEC-BIO-7]; [HD-BIO-3]

Description of Standard Condition:

Project owner supervising and operating engineer shall act on the advice of the designated biologist to ensure conformance with the biological resources Conditions of

Certification. The designated biologist shall: 1) tell the project owner and the supervising construction and operating engineer when to resume construction and; 2) advise the CPM if any corrective actions are needed or have been instituted.

Protocol:

The project owner's supervising construction and operating engineer shall halt, if needed, all construction activities in areas specifically identified by the designated biologist as sensitive to assure that potential significant biological resource impacts are avoided. The designated biologist shall:

- 1) Tell the project owner and the supervising construction and operating engineer when to resume construction; and
- 2) Advise the CPM if any corrective actions are needed or have been instituted.

Verification:

Within two working days of a designated biologist's notification of non-compliance with a Biological Resources Condition or a halt of construction, the project owner shall notify the CPM by telephone of the circumstances and actions being taken to resolve the problem or the non-compliance with a Condition. For any necessary corrective action taken by the project owner, a determination of success or failure will be made by the CPM within five working days after receipt of notice that corrective action is completed, or the project owner will be notified by the CPM that coordination with other agencies will require additional time before a determination can be made.

STAN-BIO-4: Implementation of Worker Environmental Awareness Program

[LM-BIO-4]; [SPP-BIO-4]; [LP-BIO-4]; [DEC-BIO-3]; [HD-BIO-4]

Description of Standard Condition:

Project owner to develop and implement a Worker Environmental Awareness Program in which each of its own employees, as well as employees of contractors and subcontractors who work on the project site or related facilities during construction and operation, are informed about biological resources sensitivities associated with the project.

Protocol:

The Worker Environmental Awareness Program:

- 1) Shall be developed by the designated biologist and consist of an on-site or classroom presentation in which supporting written material is made available to all participants;
- 2) Must discuss the locations and types of sensitive biological resources on the project site and adjacent areas;
- 3) Must present the reasons for protecting these resources;
- 4) Must present the meaning of various temporary and permanent habitat protection measures; and
- 5) Must identify whom to contact if there are further comments and questions about the material discussed in the program.

Verification:

At least 30 days prior to the start of rough grading, the project owner shall provide copies of the Worker Environmental Awareness Program and all supporting written materials prepared by the designated biologist and the name and qualifications of the person(s) administering the program to the CPM for approval. The project owner shall state in the Monthly Compliance Report the number of persons who have completed the training in

the prior month and a running total of all persons who have completed the training to date.

CATEGORICAL BIOLOGICAL RESOURCES CONDITIONS

There have been eight categorical conditions in the area of Biological Resources.

CAT-BIO-1: Mitigation to Avoid Impacts to Wetlands

[SPP-BIO-11]; [DEC-BIO-6]

Description of Condition:

Project Owner shall ensure the following measures are implemented to mitigate or avoid project impacts to wetlands.

Triggering Circumstance:

Potential impacts to wetlands.

Protocol:

Condition has no protocol.

Verification:

At least 45 days prior to rough grading, the project owner shall provide to the project CPM for review and approval written documentation (BRMIMP, BIO-12) that the above measures will be accomplished by the licensee and specifying the procedural terms for implementing these measures. The wetland monitoring plan annual report shall be provided to the project CPM no later than July 1 for each year monitoring is completed.

CAT-BIO-2: Compensation / Mitigation for Permanent Loss of Habitat

[SPP-BIO-13]; [LP-BIO-10];

Description of Condition:

The project owner shall provide [amount will vary] \$617,125 (less any discount negotiated with Wildlands, Inc.) in the form of a check or money order to [Wildlands Incorporated] to acquire and manage lands as compensation for the loss of habitat from SPP's construction and operation.

Triggering Circumstance:

Lost habitat acreage for listed species or wetlands.

Protocol:

Final determination of compensatory acres required will be determined by CEC after the project owner had submitted a final design of the project or by assuming a worse case estimate. The total number of compensatory acres shall account for the total number of acres lost for each habitat impacted.

Verification:

Within sixty (60) days after the Commission Decision is issued, the project owner shall provide the CPM a copy of the land purchase agreement between the project owner and Wildlands, Incorporated. At least ten (10) days prior to construction, the project owner shall provide the CPM a copy of the check or money order delivered to Wildlands Incorporated. Within ninety (90) days prior to the start of construction, the project owner shall provide the CPM with aerial photos taken before construction. Within one hundred eighty (180) days after construction, the project owner shall provide the CPM aerial photos taken after construction and an analysis of the amount of any habitat disturbance additional to that determined in the FSA and compensated for by lands purchased. The CPM will notify the project owner of any additional amount of funds required to

compensate for additional habitat disturbances at the adjusted market value at the time of construction.

CAT-BIO-3: Mitigation Measures For Listed Species

[SPP-BIO-8] - **Giant Garter Snakes**

[SPP-BIO-9] - **Swainson's Hawk**

[HD-BIO- 8] - **Mojave Ground Squirrel**

Description of Condition:

Prior to the start of surface disturbance at the project site or any related facilities, the project owner shall provide the Desert Tortoise Preserve Committee \$50,000.00 to support Mojave ground squirrel research that will aid in determining habitat characteristics indicative of suitability within various parts of its range. Once transferred, the money shall be nonrefundable.

Triggering Circumstance:

Impacts to listed species directly or through loss of habitat.

Protocol:

Condition has no protocol.

Verification:

At least ninety (90) days prior to the start of surface disturbance at the project or any related facilities, the project owner shall provide the CPM with a copy of receipts for all funds provided the Desert Tortoise Preserve Committee.

CAT-BIO-4: USFWS Biological Opinion

[LM-BIO-5]; [SPP-BIO-6]; [LP-BIO-7]; [DEC-BIO-8]

Description of Condition:

Prior to construction the project owner shall provide to the CPM final copies of the Biological Opinion per Section 7 of the federal species act obtained from the U.S. Fish and Wildlife Service (USFWS) and incorporate the terms of the agreement into the Biological Resources Mitigation Implementation and Monitoring Plan.

Triggering Circumstance:

Biological Opinion from USFWS needed and not complete at time of Decision

Protocol:

Condition has no protocol.

Verification:

At least 60 days prior to the start of rough grading, the project owner shall submit to the project CPM copies of the final USFWS Biological Opinion.

CAT-BIO-5: Measures to Mitigate Impacts to Migratory Birds

[LM-BIO-6]; [SPP-BIO-10]; [DEC-BIO-5];

Description of Condition:

The project owner shall ensure the following measures are implemented to mitigate or avoid project impacts to migratory birds.

- 1) Powerlines shall be constructed following recommendation in Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996 (Avian Powerline Interaction Committee 1996).
- 2) Powerlines located in sensitive areas shall be fitted with bird flight diverters placed on the ground wire at 16.4-foot (5-meter) intervals. Sensitive areas shall be identified

in the Biological Resources Mitigation Implementation and Monitoring Plan.

- 3) Between October through March, measures shall be taken in areas of high migratory bird use to flush birds from the construction area prior to stringing wires.
- 4) Develop a monitoring plan to analyze whether the transmission line and HRSG stacks are causing significant impacts from avian collision and/or electrocutions. If it is determined that significant impacts are occurring, purpose remedial mitigation measures to be implemented. A report presenting the monitoring data and a discussion for the mitigation effectiveness shall be provided annually for 10 years following the completion of construction. If it can be shown that impacts to birds from the project are not occurring, licensee has the option to request staff to decrease the frequency or cease monitoring.
- 5) Underbuilt distribution lines whenever possible. Underbuilt lines should be spaced below conductors to provide a vertical clearance of at least 43 inches.
- 6) If an evaporation pond is used to store the evaporator brine, the evaporation must be screened or otherwise modified to eliminate the potential for birds and wildlife to enter the pond.
- 7) Eliminate wastewater discharge as described in Condition Soils and Water 2.

Triggering Circumstance:

Potential Impacts to Migratory Birds.

Protocol:

Condition has no protocol.

Verification:

At least 45 days prior to rough grading, the project owner shall provide to the project CPM for review and approval written documentation (BRMIMP, BIO-12) that the above measures will be accomplished by the licensee and specifying the procedures used or that will be used to implement these measures. The avian collision/electrocution monitoring plan annual report shall be provided to the project CPM no later than December 31 for each year monitoring is required.

CAT-BIO-6: Streambed Alteration Agreement

[SPP-BIO-7]; [LP-BIO-8]; [HD-BIO-5]

Description of Condition:

Acquire either a Streambed Alteration Agreement or written verification that this permit is not necessary from the California Department of Fish and Game for project impacts to drainage, and implement the terms of the agreement.

Triggering Circumstance:

Ambiguity regarding need for Streambed Alteration Agreement not obtained at time of Final Decision.

Protocol:

Condition has no protocol.

Verification:

At least 45 days prior to the start of rough grading, the project owner shall provide the CPM with a copy of the California Department of Fish and Game Streambed Alteration Agreement or written verification that this permit is not necessary for this project.

CAT-BIO-7: Approval of BRMIMP

[SPP-BIO-12]; [LP-BIO-9 and 11]; [HD-BIO-6]

Description of Condition:

Submit to the CPM for review and approval a final copy of the Biological Resources Mitigation Implementation and Monitoring Plan.

Triggering Circumstance:

Final BRMIMP needed and incomplete at time of Final Decision.

Protocol:

The Biological Resources Mitigation Implementation and Monitoring Plan shall identify:

- all sensitive biological resources to be impacted, avoided, or mitigated by project construction and operation;
- all conditions agreed to in the USFWS Biological Opinion and CDFG Endangered Species Memorandum of Understanding;
- all mitigation, monitoring and compliance conditions included in the Commission's Final Decision;
- all conditions agreed to in the USACE Clean Water Act Permits;
- all conditions specified in the CDFG Streambed Alteration Permit, if required;
- required mitigation measures for each sensitive biological resource;
- required habitat compensation, including provisions for acquisition, enhancement and management, for any loss of sensitive biological resources;
- a detailed plan for protecting the existence and monitoring the integrity of the wetlands remaining on-site;
- a detailed description of measures that will be taken to avoid or mitigate temporary disturbances from construction activities;
- all locations, on a map of suitable scale, of laydown areas and areas requiring temporary protection and avoidance during construction;
- aerial photographs of all areas to be disturbed during project construction activities - one set prior to site disturbance and one set subsequent to completion of mitigation measures. Include planned timing of aerial photography and a description of why times were chosen;
- monitoring duration for each type of monitoring and a description of monitoring methodologies and frequency;
- performance standards to be used to help decide if/when proposed mitigation is or is not successful;
- all remedial measures to be implemented if performance standards are not met; and
- a process for proposing plan modifications to the CPM and appropriate agencies for review and approval.

Verification:

At least 45 days prior to rough grading, the project owner shall provide the CPM with the final version of the Biological Resources Mitigation Implementation and Monitoring Plan for this project, and the CPM will determine the plan's acceptability within 15 days of receipt of the final plan. The project owner shall notify the CPM five working days before implementing any modifications to the Biological Resource Mitigation Implementation and Monitoring Plan.

Within 30 days after completion of construction, the project owner shall provide to the CPM, for review and approval, a written report identifying which items of the Biological Resource Mitigation Implementation and Monitoring Plan have been completed, a summary of all modifications to mitigation measures made during the project's construction phase, and which condition items are still outstanding.

UNIQUE BIOLOGICAL RESOURCES CONDITIONS

There have been five unique conditions in the area of biological:

UNI-BIO-1: Obtain Incidental Take Permit from CDFG.

[LP-BIO-6]

Description of Condition :

Prior to start of ground disturbance activities, the project owner shall acquire an Incidental Take Permit from the California Department of Fish and Game (CDFG) (per Section 2081(b) of the California Endangered Species Act and implement the permit terms and conditions.

Triggering Situation:

Protocol:

Condition has no protocol.

Verification:

No less than five (5) days prior to the start of any project related ground disturbance activities the project owner shall submit to the CPM a copy of the final CDFG Incidental Take Permit. Permit terms and conditions will be incorporated into the Biological Resources Mitigation Implementation and Monitoring Plan. (See also Condition of Certification BIO-9.)

UNI-BIO-2: Memorandum of Understanding with California Department of Fish & Game

[SPP-BIO-5]

Description of Condition:

Prior to ground disturbance the project owner shall enter into an Endangered Species Memorandum of Understanding (MOU) with the California Department of Fish and Game and implement terms of the agreement.

Triggering Situation:

Potential impact to California listed / protected species.

Protocol:

Condition has no protocol.

Verification:

At least 60 days prior to the start of rough grading, the project owner shall submit to the CPM a copy of the final USFWS Biological Opinion.

UNI-BIO-3: Written Report after Construction Regarding BRMIMP

[DEC-BIO-9]

Description of Condition:

Within 30 days after completion of construction, the project owner shall provide to the CPM for review and approval a written report identifying:

- Which items of the BRMIMP have been completed,

- A summary of all modifications to mitigation measures made during the project's construction phase, and,
- Which condition items are still outstanding.

Triggering Situation:

Some type of ambiguity as to how certain BRMIMP issues would be resolved.

Protocol:

Condition has no protocol.

Verification:

The CPM will review the BRMIMP, and, as deemed necessary, ask the project owner to modify and/or clarify the report content and/or format. If the BRMIMP does not include the monitoring protocol listed above, the CPM will return the plan within 14 days to the project owner for revision. During operation of the project, the CPM or designee will determine via telephone or through visits to the project site, as deemed necessary, whether or not the project owner has complied with this condition. If the project owner has not complied with any aspect of this condition, the CPM will notify the project owner of making this determination. If the project owner fails to correct any identified problem within a reasonable time, as determined by the CPM, the CPM will initiate the Energy Commission's complaint filing process. For any necessary corrective action taken by the project owner, the CPM shall make a determination of success or failure. Such action shall be made:

- after receipt of notice that corrective action is completed, or
- the CPM shall notify the project owner that coordination with other agencies will require additional time before a determination can be made.

UNI-BIO-4: Natural Gas Pipeline Builder Must Comply with CEC Conditions

[HD-BIO- 9]

Description of Condition:

In the event that the project owner proceeds with the 32-mile long natural gas pipeline that interconnects the High Desert Power Project to an existing gas line near Kramer Junction, and prior to the start of surface disturbance at the construction site, the project owner shall enter into a legally binding agreement with Southwest Gas Corporation whereby Southwest Gas Corporation and any successors or assignees agree to comply with all Conditions of Certification of the project that pertain to the pipeline. The agreement shall require that noncompliance with Conditions of certification or other permit requirements pertaining to biological resources shall be reported by the designated biologist verbally to the CPM within three (3) days after occurrence, or within three (3) days of the time the party responsible for making such report knew or should have known of the occurrence, with a follow-up notification in writing no more than one (1) week after the verbal report. Included in the agreement shall be terms that allow the CPM right-of-way access to inspect and assess the status of required mitigation measures. The initial agreement, and any subsequent agreement, may be entered into with a party other than Southwest Gas Corporation subject to the approval of the CPM. The initial agreement, and any subsequent agreement, may be terminated at any time, provided that the terminated agreement is replaced by another agreement which complies with the requirements set forth above and is effective immediately upon termination of the prior agreement. An agreement that complies with the requirements set forth above shall be in

place at all times following commencement of the construction of the pipeline until the High Desert Power Project is permanently retired from producing electricity. The project owner is ultimately responsible for implementation of all mitigation measures associated with the 32-mile gas pipeline.

Triggering Situation:

Gas pipeline has potential for impacts to listed species or habitats.

Protocol:

Condition has no protocol.

Verification:

At least sixty (60) days prior to surface disturbance at the construction site of the gas pipeline, the project owner will provide a copy of the initial agreement to the CPM for review and approval in consultation with appropriate state, local, and federal agencies. Any proposal to enter into a subsequent agreement will be submitted to the CPM for review and approval in consultation with appropriate state, local, and federal agencies.

UNI-BIO-5: Comprehensive Mitigation Measures for Biological Resources

[LP-BIO-1]

Description of Condition:

Project Owner will implement the following mitigation measures identified in Section 5.6.3.1 found on pages 5.6-28 to 5.6-38 of the LPGP AFC.

Triggering Situation:

La Paloma provided 27 mitigation measures they promised to follow. The mitigation measures were handed back to them as a condition.

Protocol:

1. Site transmission line poles, access roads, pulling sites, and storage and parking areas to avoid sensitive resources whenever possible.
2. Avoid all wetlands.
3. Design and construct transmission lines and poles to reduce the likelihood of electrocutions of large birds.
4. Bury any pipelines that cross-streams and dry creek beds below the scour depth for each waterway. Streambeds disturbed during construction will be recontoured so that drainage patterns are not changed from pre-construction conditions.
5. Implement a Worker Environmental Awareness Program.
6. Hire a qualified biologist, who is acceptable to Energy Commission, USFWS, and CDFG staff to conduct pre-construction surveys no more than fourteen (14) days prior to initiation of construction in any portion of the project area.
7. Implement CDFG approved take avoidance measures for the blunt-nosed leopard lizard.
8. Clearly mark construction area boundaries with stakes, flagging, and/or rope or cord to minimize inadvertent degradation or loss of adjacent habitat during facility construction. All equipment storage will be restricted to designated construction zones or areas that are currently not considered sensitive species habitat.
9. Post signs and/or fences the power plant site and laydown areas to restrict vehicle access to designated areas.
10. Institutes traffic restraints and signs to minimize temporary disturbances. A 20-

- mph speed limit will be implemented on the project site.
11. Designate a specific individual as a contact representative between La Paloma, USFWS, Energy Commission, and CDFG to oversee compliance with mitigation measures detailed in the Biological Opinion.
 12. Provide a qualified wildlife biologist to monitor all activities that may result in incidental take of listed species or their habitat.
 13. Conduct compliance inspections once per week and provide an annual compliance report to the Energy Commission, the USFWS Sacramento Field Office, and the CDFG Region 4 office.
 14. Limit transmission line construction to daylight hours. For areas of high concentrations of nocturnal sensitive species (giant kangaroo rat, San Joaquin kit fox, Tipton kangaroo rat), work activities will be minimized during nighttime hours. Night lighting will be hooded.
 15. Provide wildlife escape ramps for construction areas that contain steep-walled holes or trenches.
 16. Fence open holes or trenches within 50-feet of giant kangaroo rat burrows. Fence will be hardware cloth or similar materials that are approved by USFWS and CDFG.
 17. Inspect trenches each morning for entrapped animals prior to the beginning of construction. Construction will be allowed to begin only after trapped animals are able to escape voluntarily.
 18. Inspect all construction pipes, culverts, or similar structures with a diameter of 4-inches or greater for kit foxes prior to pipe burial. Pipes to be left in trenches overnight will be capped.
 19. Provide a post-construction compliance report, within forty-five (45) calendar days of completion of the project, to the USFWS, CDFG, and the Energy Commission.
 20. Complete, and institute, a habitat reclamation plan once temporarily disturbed habitat disturbance is completed. Annual inspections will occur for three (3) years to check for compliance with the reclamation plan goals.
 21. Make certain that all food-related trash will be disposed of in closed containers and removed at least once a week. Feeding of wildlife shall be prohibited.
 22. Prohibit firearms except for those carried by security personnel.
 23. Prohibit pets from the project site.
 24. Minimize the use of rodenticides and herbicides in the project area.
 25. Report all inadvertent deaths of San Joaquin kit fox, San Joaquin antelope squirrel, giant kangaroo rat, or blunt-nosed leopard lizard to the appropriate La Paloma representative. Injured animals will be reported to CDFG, and the project owner will follow instructions that are provided by CDFG.
 26. Consult with USFWS, CDFG, and Energy Commission regarding appropriate protection measures for sensitive species following resolution of any emergency situation that takes place in sensitive habitat during clean-up activities.
 27. Acquire compensation lands to satisfy the requirements of state and federal endangered species acts, consistent with standard USFWS and CDFG compensation requirements for impacts to listed species habitats.

Verification:

At least sixty (60) days prior to start of any project related ground disturbance activities, the project owner shall provide the Energy Commission Compliance Project Manager (CPM) with the final version of the BRMIMP for this project, and the CPM will determine the plan's acceptability within fifteen (15) days of receipt of the final plans. Implementation of the above measures shall be included in the BRMIMP.

BIOLOGICAL RESOURCES ANALYSIS FOR MVPP

INTRODUCTION

This section presents MVPC's analysis of the LORS, potential impacts, and required mitigation for the biological resources issue area of MVPP. Because MVPP is utilizing an existing power plant site and requires essentially one linear facility, a natural gas pipeline almost entirely within paved streets, most potential impacts have been mitigated by project design. Following this section, MVPC analyzes past and new needed conditions of certification.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Federal

CLEAN WATER ACT OF 1977

Title 33, United States Code, sections 1251 – 1376, and Code of Federal Regulations, part 30, section 330.5(a)(26).

ENDANGERED SPECIES ACT OF 1973

Title 16, United States Code, section 1531 et seq., and Title 50, Code of Federal Regulations, part 17.1 et seq., designate and provide for protection of threatened and endangered plant and animal species, and their critical habitat.

MIGRATORY BIRD TREATY ACT

Title 16, United States Code, sections 703 - 712, prohibits the take of migratory birds.

State

CALIFORNIA ENDANGERED SPECIES ACT OF 1984

Fish and Game Code sections 2050 et seq. protects California's rare, threatened, and endangered species.

NEST OR EGGS – TAKE, POSSESS, OR DESTROY

Fish and Game Code section 3503 protects California's birds by making it unlawful to take, possess, or needlessly destroy the nest or eggs or any bird.

BIRDS OF PREY OR EGGS – TAKE, POSSESS, OR DESTROY

Fish and Game Code section 3503.5 protects California's birds of prey and their eggs by making it unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird.

MIGRATORY BIRDS – TAKE OR POSSESSION

Fish and Game Code section 3513 protects California's migratory birds by making it unlawful to take or possess any migratory non-game bird as designated in the Migratory Bird Treaty Act or any part of such migratory non-game bird.

FULLY PROTECTED SPECIES

Fish and Game Code sections 3511, 4700, 5050, and 5515 prohibits take of animals that are classified as Fully Protected in California.

SIGNIFICANT NATURAL AREAS

Fish and Game Code section 1930 et seq. designates certain areas such as refuges, natural sloughs, riparian areas and vernal pools as significant wildlife habitat.

STREAMBED ALTERATION AGREEMENT

Fish and Game Code section 1600 et seq. requires CDFG to review project impacts to waterways, including impacts to vegetation and wildlife from sediment, diversions and other disturbances.

NATIVE PLANT PROTECTION ACT OF 1977

Fish and Game Code section 1900 et seq. designates state rare, threatened, and endangered plants.

CALIFORNIA CODE OF REGULATIONS

Title 14, sections 670.2 and 670.5 list animals of California designated as threatened or endangered.

REGIONAL WATER QUALITY BOARD

To verify that the federal Clean Water Act permitted actions comply with state regulations, PEF will need to get a Section 401 certification from the San Joaquin Valley Regional Water Quality Control Board. The Regional Board provides its certification after reviewing the federal Nationwide Permit(s) that is provided by the U. S. Army Corp of Engineers.

Local

Policies set forth in the San Bernardino County General Plan.
Encourages preservation and management of biotic resources, especially sensitive species and habitats. Puts planning constraints in sensitive habitat areas. Requires mitigation if there will be significant project effects on threatened or endangered species.

IMPACTS

Potential impacts from MVPP that require analysis include, cooling tower drift, light and noise related indirect impacts, and crossing of the Santa Ana River and Etiwanda Creek.

Cooling Tower Impacts

This section provides an assessment of the potential impact of cooling tower drift on nearby vegetation from operation of the power plant. The project description includes four cooling towers. Water for the cooling towers will be supplied by onsite wells, offsite wells, and if quality and treatment cost issues can be resolved, wastewater from the City of Redlands WWTP. An analysis of this water is presented on Table 6.14-3 in Section 6.14.1.6 of MVPC's AFC. The following dissolved solids would be present in the drift, listed in order of decreasing concentration: sulfate, sodium, chloride, calcium, nitric oxide, silicon dioxide, bicarbonate, potassium, magnesium, and phosphate. Other dissolved solids would be present in the circulating water, but are projected to be in concentrations of one part per million or less. Estimated cooling tower drift emission and modeled deposition rates are documented on Tables 6.8-27 and 6.8-28 in Section 6.8.3.2.2 of MVPC's AFC.

Vegetation may be damaged by foliar application of salts when a droplet deposited on a leaf contains sufficient high concentrations of dissolved solids. These are taken up by the leaf and, if present in large enough amounts, may kill the cells below causing a necrotic (dead) lesion on the leaf. Such lesions may result in a reduction in overall photosynthetic capacity. Agricultural varieties of plants, selected for large leaf area and rapid growth, are considered to be more sensitive than most non-cultivated vegetation to cooling tower drift.

The cooling towers will be located in the northern portion of the current power plant site. The towers will be adjacent to a sensitive riparian woodland habitat and nearby local farmland. With respect to special status species, the environment surrounding the power plant within and along the Santa Ana River.

In general, the quantity of total dissolved solids rather than specific chemical composition determines the impact from foliar deposition. Field studies of agricultural crops in a dry climate have shown that when cooling tower salts are applied at deposition rates of about 3 to 4 kilograms per hectare per month to sensitive species such as corn, significant (10 percent) reduction in yield may occur. As noted above, natural vegetation is generally more resistant than crop plants to damage from salt deposition.

Deposition rates modeled for the proposed cooling towers projected a maximum total salt deposition of one kilogram per hectare per month at a distance of 134 meters east northeast of the cooling towers. This places the maximum deposition approximately 42 meters from the property fenceline and at least 20 meters into the riparian woodland habitat. However, the projected maximum salt deposition for the proposed project is less than the threshold for damage to sensitive agricultural crops under arid conditions. As a result, the deposition of salts to the less-sensitive natural vegetation found within the riparian woodland habitat is not projected to cause detectable reduction in growth, or significant damage.

The specific composition of dissolved solids in circulation water was also reviewed for potential toxicity of individual components to plants. Several of the largest components of dissolved solids in the drift (sulfate, calcium, potassium, magnesium, and phosphate) are plant nutrients. Foliar application at the rate projected for the project would be

neutral to beneficial to overall plant growth. Bicarbonates, chlorides, sodium and silica are ubiquitous in the natural environment and are tolerated by plants to a relatively high degree. Deposition of these compounds at the maximum levels projected near the power plant site will not cause toxicity to the local natural vegetation.

In summary, the cooling tower drift deposition for the MVPC plant is projected to be much lower than that known to cause damage to vegetation, both for total salt deposition and for individual dissolved solid components.

Light and Noise Indirect Impacts

Direct light and noise impacts are unlikely given the existing noise sources in the area. Additionally, MVPC has agreed to shield lighting as a visual resource condition.

Santa Ana River

Boring underneath has eliminated impacts to the Santa Ana River.

Etiwanda Creek

The trenching for the Etiwanda Creek crossing will occur only in the existing right of way for Arrow Route.

Gas Pipelines

There will be no substantial impacts to biological resources during normal pipeline operation. Routine monitoring will not pose an adverse impact to resources, as the pipelines will run almost entirely through already existing city streets and previously disturbed areas.

MITIGATION

The following mitigation measures correspond to the potential impacts to sensitive wildlife species and their habitats as previously identified.

The gas pipeline will be placed within or adjacent to the south side of Arrow Route in the vicinity of East Etiwanda Wash. Staging areas will be restricted to unvegetated (bare soil or paved) lots and will not encroach into the ruderal/non-native grassland east of Etiwanda Wash. Pre-construction surveys will be conducted prior to construction in the vicinity of this watercourse. Surveys will be conducted by a qualified biologist familiar with the sensitive species described in this report and their habitats. Surveys for reptiles and amphibians will be conducted when these species are known to be active. The work area will be flagged or fenced to prevent construction equipment from disturbing adjacent areas.

Pipeline installation at the Tippecanoe Avenue crossing will avoid impacts to sensitive riparian scrub habitats and associated wildlife species by the following measures:

- MVPC will conduct an appropriate number of surveys, according to USFWS survey protocol, for least Bell's vireo, southwestern willow flycatcher, San Bernardino kangaroo rat, and other sensitive species, prior to construction. In those surveys, the location of sensitive wildlife resources will be depicted and designated for avoidance on project construction plans.
- Construction at this crossing will be timed to avoid the nesting season of most birds.
- When working within or adjacent to any watercourse, ravine, etc., the contractor will have an emergency spill containment kit to contain and remove spilled fuels, hydraulic fluids, etc. Likewise, equipment re-fueling or storage of these materials will not occur within 500 feet of any surface water.

Implementation of these mitigation measures will be sufficient to reduce potential construction-related impacts to insignificant levels. There are no unavoidable significant impacts to wildlife associated with installation of the pipelines. There are no significant impacts to special status species from the construction and operation of the power plant.

Unavoidable significant impacts to sensitive wildlife species from operation of the pipeline and power plant are limited to the potential impacts associated with the occurrence of a major leak or explosion. The level of impact would depend on the location, seasonal timing, quality and quantity of habitat affected, number and type of species affected, magnitude of the accident, and length of time and level of effort required for cleanup and repair activities.

Cumulative Impacts:

Construction of the proposed project could create short-term impacts to the biological resources in the project area, primarily within waterways, that would be reduced to insignificance with implementation of proposed mitigation. However, the impacts are only associated with construction and should not permanently alter important biological resources. Based on discussions with local planning agencies, there are no large-scale construction projects identified within the project area that could create potentially significant impacts to the biological resources of the project area. Additionally, if the project or future projects in the project area were to encounter sensitive biological resources during construction, the potential cumulative impacts would be low as long as mitigation measures were implemented to protect the resources. The mitigation measures proposed for this project are outlined below and would effectively reduce the direct, indirect, and cumulative adverse environmental impacts on biological resources.

FACILITY CLOSURE

No adverse biological impacts would occur due to the closure of the power plant site. On site revegetation may be necessary; however, this should not impact the surrounding resources.

Likewise, there would be no impacts to biological resources from abandonment in place of the ancillary pipelines.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions:

All impacts will be minimized and mitigated to below significance by the project design and the below stipulated conditions.

Recommendations:

MVPC recommends that the below conditions be adopted.

MVPC's CONDITIONS ANALYSIS

MVPP is a natural gas combined cycle project very similar to previously permitted projects. Thus, MVPP requires the same four standard conditions as have all previously permitted projects. The disposition of all past conditions is presented here. There are seven categorical and five unique.

DISPOSITION OF STANDARD CONDITIONS

STAN-BIO-1: *Applicable*

This condition requires that no site preparation begin until the designated biologist is available on site. This standard condition is applicable to the MVPP.

STAN-BIO-2: *Applicable*

This condition sets forth the duties required of the CPM approved and designated biologist: This standard condition is applicable to MVPP.

STAN-BIO-3: *Applicable*

This condition requires the project owner's supervising and operating engineer to act on the advice of the designated biologist to ensure conformance with the biological resources Conditions of Certification. This standard condition is applicable to MVPP.

STAN-4: *Applicable*

This condition requires the project owner to develop and implement a Worker Environmental Awareness Program. This standard condition is applicable to MVPP.

DISPOSITION OF CATEGORICAL CONDITIONS

CAT-BIO-1: Not Needed

This condition ensures that measures are implemented to mitigate or avoid project impacts to wetlands. Because no wetlands are threatened by MVPP this condition is not needed.

CAT-BIO-2: Not Needed

This condition requires the project owners to provide funds to acquire and manage lands as compensation for the loss of habitat from compensation for loss of habitat.

CAT-BIO-3: Not Needed

This condition provides mitigation measures for listed, endangered or threatened species requiring project owners to provide funds for the mitigation of disturbed habitats for such species. Because MVPP will not impact listed, endangered, or threatened species, this condition is not required.

CAT-BIO-4: Applicable

This condition requires the project owner to provide to the CPM, final copies of the Biological Opinion obtained from the U.S. Fish and Wildlife Service (USFWS) and incorporate the terms of the agreement into the Biological Resources Mitigation Implementation and Monitoring Plan prior to construction. Though MVPP expects to obtain a concurrence letter from USFWS, this condition is applicable to the MVPP. MVPP stipulates to this condition.

CAT-BIO-5: Not needed

This condition ensures measures are implemented to mitigate or avoid project impacts to migratory birds. Because MVPP will have no impacts on migratory birds, this condition is not needed.

CAT-BIO-6: Applicable

This condition requires the project owner to acquire either a Streambed Alteration Agreement or written verification that this permit is not necessary from the California Department of Fish and Game. This condition is applicable to the MVPP at the Etiwanda Creek crossing and is required in order to maintain compliance with applicable LORS. MVPP expects that any streambed alteration agreement for Etiwanda to be easily obtainable. MVPP stipulates to this condition

CAT-BIO-7: Applicable

This condition requires the project owner to submit to the CPM for review and approval a final copy of the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP). This condition is applicable to the MVPP.

DISPOSITION OF UNIQUE CONDITIONS

UNI-BIO-1: Not Needed

This condition required La Paloma to acquire an Incidental Take Permit from the California Department of Fish and Game. Because MVPP will not have any "take" of listed species, this condition is not needed.

UNI-BIO-2: Not Needed

This condition requires the project owner to enter into an Endangered Species Memorandum of Understanding (MOU) with the California Department of Fish and Game and implement terms of the agreement prior to ground disturbance.

UNI-BIO-3: Not Needed

This condition required Delta to submit a report after construction regarding the BRMIMP. Because MVPP will not have any ambiguities regarding how certain elements of BRMIMP are carried out, this condition is not needed.

UNI-BIO-4: Not Needed

This condition required High Desert to ensure that the gas pipeline remained subject to all conditions of certification. Because MVPP will exercise control over the gas pipeline, this condition is not needed.

UNI-BIO-5: Not Needed

This condition required La Paloma to implement certain mitigation measures identified in its AFC. MVPC stipulates to the following conditions:

MVPC'S STIPULATED CONDITIONS OF CERTIFICATION

MVPC stipulates to the following conditions:

BIO-1: Approved Designated Biologist

Construction site and/or ancillary facilities preparation shall not begin until an Energy Commission Compliance Project Manager (CPM) approved designated biologist is available on site. The CPM approved designated biologist shall perform the following duties: 1) advise the project owner's supervising construction or operations engineer on the implementation of the biological resource Conditions of Certification; 2) supervise or conduct mitigation, monitoring, and other biological resource compliance efforts, particularly in areas requiring avoidance or containing sensitive biological resources, such as wetlands and special statues species; and 3) notify the project owner and the CPM of any non-compliance with any Condition.

Protocol:

The designated biologist must meet the following minimum qualifications:

- A bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field,
- Three years of experience in field biology or current certification of a nationally recognized biological society, such as the Ecological
- Society of America or The Wildlife Society,
- One year of field experience with resources found in or near the project area, and
- Ability to demonstrate to the satisfaction of the CPM the appropriate education and experience for the biological resource tasks that must be addressed during project construction and operation.

If the CPM determines the proposed designated biologist to be unacceptable, the project owner shall submit another individual's name and qualifications for consideration. If the approved designated biologist needs to be replaced, the project owner shall obtain approval of a new designated biologist by submitting to the CPM the name, qualifications, address, and telephone number of the proposed replacement. No disturbance will be allowed in any designated sensitive area(s) until the CPM approves a new designated biologist and that designated biologist is on site.

Verification:

At least 30 days prior to the start of surface disturbing activities at the project site and/or at ancillary facilities, the project owner shall submit to the CPM for approval, the name, qualifications, address, and telephone number of the individual selected by the project owner as the designated biologist. If a designated biologist is replaced, the information on the proposed replacement as specified in the condition must be submitted in writing to the CPM.

If the project owner is not in compliance with any aspect of this condition, the CPM will notify the project owner of making this determination within 14 days of becoming aware of the existence of any noncompliance. Until the project owner corrects any identified problem, construction activities will be halted in areas specifically identified by the CPM or designee as appropriate to assure the potential for significant biological impacts is avoided.

For any necessary corrective action taken by the project owner:

- The CPM shall make a determination of success or failure of such action after receipt of notice that corrective action is completed, or
- The CPM shall notify the project owner that coordination with other agencies will require additional time before a determination can be made.

BIO-2: Designated Biologist Duties

CPM approved designated biologist shall perform the following duties: 1) advise the project owner's supervising construction or operations engineer on the implementation of the biological resource Conditions of Certification; 2) supervise or conduct mitigation, monitoring, and other biological resources, such as wetlands and special statutes species; and 3) notify the project owner and the CPM of any non-compliance with any Condition.

Verification:

The designated biologist shall maintain written records of the tasks described above, and summaries of these records shall be submitted along with the Monthly Compliance Reports to the CPM.

BIO-3: Utilize Designated Biologist

Project owner supervising and operating engineer shall act on the advice of the designated biologist to ensure conformance with the biological resources Conditions of Certification. The designated biologist shall: 1) tell the project owner and the supervising construction and operating engineer when to resume construction and; 2) advise the CPM if any corrective actions are needed or have been instituted.

Protocol:

The project owner's supervising construction and operating engineer shall halt, if needed, all construction activities in areas specifically identified by the designated biologist as

sensitive to assure that potential significant biological resource impacts are avoided. The designated biologist shall:

- Tell the project owner and the supervising construction and operating engineer when to resume construction; and,
- Advise the CPM if any corrective actions are needed or have been instituted.

Verification:

Within two working days of a designated biologist's notification of non-compliance with a Biological Resources Condition or a halt of construction, the project owner shall notify the CPM by telephone of the circumstances and actions being taken to resolve the problem or the non-compliance with a Condition. For any necessary corrective action taken by the project owner, a determination of success or failure will be made by the CPM within five working days after receipt of notice that corrective action is completed, or the project owner will be notified by the CPM that coordination with other agencies will require additional time before a determination can be made.

BIO-4: Implementation of Worker Environmental Awareness Program

Project owner to develop and implement a Worker Environmental Awareness Program in which each of its own employees, as well as employees of contractors and subcontractors who work on the project site or related facilities during construction and operation, are informed about biological resources sensitivities associated with the project.

Protocol:

The Worker Environmental Awareness Program:

- Shall be developed by the designated biologist and consist of an on-site or classroom presentation in which supporting written material is made available to all participants;
- Must discuss the locations and types of sensitive biological resources on the project site and adjacent areas;
- Must present the reasons for protecting these resources;
- Must present the meaning of various temporary and permanent habitat protection measures; and,
- Must identify whom to contact if there are further comments and questions about the material discussed in the program.

Verification:

At least 30 days prior to the start of rough grading, the project owner shall provide copies of the Worker Environmental Awareness Program and all supporting written materials prepared by the designated biologist and the name and qualifications of the person(s) administering the program to the CPM for approval. The project owner shall state in the Monthly Compliance Report the number of persons who have completed the training in

the prior month and a running total of all persons who have completed the training to date.

BIO-5:USFWS Biological Opinion

Prior to construction the project owner shall provide to the CPM final copies of the Biological Opinion per Section 7 of the federal species act obtained from the U.S. Fish and Wildlife Service (USFWS) and incorporate the terms of the agreement into the Biological Resources Mitigation Implementation and Monitoring Plan.

Verification:

At least 60 days prior to the start of rough grading, the project owner shall submit to the project CPM copies of the final USFWS Biological Opinion.

BIO-6: Streambed Alteration Agreement

Acquire either a Streambed Alteration Agreement or written verification that this permit is not necessary from the California Department of Fish and Game for project impacts to drainage, and implement the terms of the agreement.

Verification:

At least 45 days prior to the start of rough grading, the project owner shall provide the CPM with a copy of the California Department of Fish and Game Streambed Alteration Agreement or written verification that this permit is not necessary for this project.

BIO-7: Approval of BRMIMP

Submit to the CPM for review and approval a final copy of the Biological Resources Mitigation Implementation and Monitoring Plan.

Protocol:

The Biological Resources Mitigation Implementation and Monitoring Plan shall identify:

- all sensitive biological resources to be impacted, avoided, or mitigated by project construction and operation;
- all conditions agreed to in the USFWS Biological Opinion and CDFG Endangered Species Memorandum of Understanding;
- all mitigation, monitoring and compliance conditions included in the Commission's Final Decision;
- all conditions agreed to in the USACE Clean Water Act Permits;
- all conditions specified in the CDFG Streambed Alteration Permit, if required;
- required mitigation measures for each sensitive biological resource;
- required habitat compensation, including provisions for acquisition, enhancement and management, for any loss of sensitive biological resources;
- a detailed plan for protecting the existence and monitoring the integrity of the wetlands remaining on-site;
- a detailed description of measures that will be taken to avoid or mitigate temporary disturbances from construction activities;
- all locations, on a map of suitable scale, of laydown areas and areas requiring temporary protection and avoidance during construction;

- aerial photographs of all areas to be disturbed during project construction activities - one set prior to site disturbance and one set subsequent to completion of mitigation measures. Include planned timing of aerial photography and a description of why times were chosen;
- monitoring duration for each type of monitoring and a description of monitoring methodologies and frequency;
- performance standards to be used to help decide if/when proposed mitigation is or is not successful;
- all remedial measures to be implemented if performance standards are not met; and,
- a process for proposing plan modifications to the CPM and appropriate agencies for review and approval.

Verification:

At least 45 days prior to rough grading, the project owner shall provide the CPM with the final version of the Biological Resources Mitigation Implementation and Monitoring Plan for this project, and the CPM will determine the plan's acceptability within 15 days of receipt of the final plan. The project owner shall notify the CPM five working days before implementing any modifications to the Biological Resource Mitigation Implementation and Monitoring Plan.

Within 30 days after completion of construction, the project owner shall provide to the CPM, for review and approval, a written report identifying which items of the Biological Resource Mitigation Implementation and Monitoring Plan have been completed, a summary of all modifications to mitigation measures made during the project's construction phase, and which condition items are still outstanding.

UNRESOLVED ISSUES IN BIOLOGICAL RESOURCES

MVPC is not aware of any biological resources issues requiring further exploration, analysis or mitigation. MVPC submits the above-stipulated conditions believing that the area of biological resources will be thus fully addressed.

SOIL AND WATER RESOURCES

This section presents a comprehensive analysis of Soil and Water Resources issues, both in previously permitted projects and in the case of the Mountainview Power Plant (MVPP)¹⁷. Previously permitted projects are analyzed for their standard, categorical and unique conditions as well as what triggered each categorical and unique condition. Next, MVPP is juxtaposed with past projects allowing necessary conditions to be identified. The juxtaposition begins by a thorough review of applicable laws, ordinances, regulations and standards (LORS). Then, the setting of the MVPP in the context of soil and water is presented. And, finally, Mountainview Power Company (MVPC) stipulates to conditions providing required mitigation and LORS compliance. The section closes by identifying any outstanding issues not resolved by the stipulated conditions.

OVERVIEW OF SOIL AND WATER RESOURCES ISSUE AREA

The issue area of soil and water resources has three standard conditions requiring a final Erosion Control and Revegetation Plan, Storm Water Pollution Prevention Plan, and a General Industrial Activities Storm Water Permit. Additionally, there are two “categorical” conditions, one pertaining to the Calpine plants in the Contra Costa area and their use of reclaimed water and one that applied to three projects and involved those projects’ intention to discharge to a wastewater treatment facility. There have been eighteen (18) unique conditions included in projects to date, three from Sutter Power Plant and fifteen from High Desert.

PAST SOIL AND WATER RESOURCES CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-WAT-1	Final Erosion Control & Revegetation Plan	Yes
STAN-WAT-2	Storm Water Pollution Prevention Plan	Yes
STAN-WAT-3	General Industrial Activities Storm Water Permit	Yes
CAT-WAT-1	Use of Reclaim Water Whenever Possible	No
CAT-WAT-2	Required Permits to Discharge to Wastewater Treatment Facility	No
UNI-SPP-WAT-1	Use Dry Cooling Only	No

¹⁷ As in all the sections of this document, abbreviations are used for the last five permitted projects before the California Energy Commission. Those abbreviations are:

SPP = Sutter Power Plant
DEC = Delta Energy Center
LM = Los Medanos Energy Center
HD = High Desert
LP = La Paloma

UNI-SPP-WAT-2	No Discharge to Surface Water	No
UNI-SPP-WAT-3	Drainage Plan for Surface Water	No
UNI-HD-WAT-4	Limit on Water Source	No
UNI-HD-WAT-5	Provide Copy of Storage Agreement	No
UNI-HD-WAT-6	Provide copy of Will Serve Letter	No
UNI-HD-WAT-7	Injection Schedule	No
UNI-HD-WAT-8	Calculation of Banked Water Balance	No
UNI-HD-WAT-9	Banked Water Use	No
UNI-HD-WAT-10	Maintain Operational Control of Water Treatment Facility	No
UNI-HD-WAT-11	Monitor Aquifer Hydraulic Parameters	No
UNI-HD-WAT-12	Use HDPP Model to Monitor Hydraulic Conductivity of Aquifer	No
UNI-HD-WAT-13	Groundwater Level Monitoring	No
UNI-HD-WAT-14	Approved Water Treatment and Monitoring Plan	No
UNI-HD-WAT-15	Provide Access for Site Clean Up Efforts of Air Force	No
UNI-HD-WAT-16	Aquifer Storage and Recovery Agreement Required	No
UNI-HD-WAT-17	Use Flow Meters on Wells and Delivery Systems	Yes
UNI-HD-WAT-18	Limits On Use of Water Treatment Facilities	No

STANDARD SOIL AND WATER RESOURCES CONDITIONS

STAN-WAT-1: Final Erosion Control & Revegetation Plan

[LM-WAT-2]; [SPP-WAT-3]; [LP-WAT-2]; [DEC-WAT-2] [HD-WAT-16]

Standard condition language:

Prior to the initiation of any earth moving activities, the project owner shall submit an Erosion Control and Storm Water Management Plan for [appropriate local government unit] review and Energy Commission staff approval. The final plan shall contain all the

elements of the draft plan with changes made to address the final design of the project.

Protocol:

Condition has no protocol.

Verification:

The final Erosion Control and Storm Water Management Plan shall address all comments of the City of Pittsburgh Community Development Department and be submitted to the Energy Commission CPM for approval at least 30 days prior to the initiation of any earth moving activities.

STAN-WAT-2: Storm Water Pollution Prevention Plan

[LM-WAT-1]; [SPP-WAT-4]; [LP-WAT-1]; [DEC-WAT-1]

Standard condition language:

Prior to beginning any clearing, grading, or excavation activities associated with project construction, the project owner will develop and implement a Storm Water Pollution Prevention Plan.

Protocol:

Condition has no protocol.

Verification:

At least 30 days prior to the start of construction, the project owner will submit to the Energy Commission Compliance Project Manager (CPM) a copy of the SWPPP.

STAN-WAT-3: General Industrial Activities Storm Water Permit

[LM-WAT-3]; [SPP-WAT-5]; [LP-WAT-3]; [DEC-WAT-3]; [HD-WAT-15]

Standard condition language:

At least 60 days prior to commercial operation, the project owner must submit a notice of intent to the State Water Resources Control Board to indicate that the project will operate under provisions of the General Industrial Activity Storm Water Permit. As required by the general permit, the project owner will develop and implement a Storm Water Pollution Prevention Plan.

Protocol:

Condition has no protocol.

Verification:

At least 30 days prior to the start of commercial operation, the project owner will submit to the Energy Commission CPM copies of the Notice of Intent and the Storm Water Pollution Prevention Plan approved by the State Water Resources Control Board.

CATEGORICAL SOIL AND WATER RESOURCES CONDITIONS

There are two categorical conditions in the area of soil and water, one dealing with reclaim water and one dealing with discharging to a wastewater treatment facility

CAT-WAT-1: Use of Reclaim Water Whenever Possible

[DEC-WAT-4]; [LM-WAT-5]

Description of categorical condition:

The project owner shall use tertiary treated effluent from the Delta Diablo Wastewater Treatment Facility for cooling water make-up whenever possible. If water from the

Contra Costa Canal is used for cooling water make-up for more than 14 days, the project owner shall notify staff in writing of this fact and explain why the backup source is being used.

Protocol:

Condition has no protocol.

Verification:

The project owner shall notify the Energy Commission CPM in writing if the backup water supply is used for cooling water make-up for more than 14 consecutive days. The notification should explain the cause of the interruption and the anticipated time when treated effluent will again be available.

CAT-WAT-2: Required Permits to Discharge to Wastewater Treatment Facility
[LM-WAT-4]; [LP-WAT-4]; [DEC-WAT-5]

Description of categorical condition:

The project owner shall obtain an Industrial Discharge Permit from the Sanitation District prior to the discharge of the project's wastewater to the area Wastewater Treatment Facility.

Protocol:

Condition has no protocol.

Verification:

No fewer than 45 days prior to commercial operation, the project owner shall provide the Energy Commission CPM a copy of a valid Industrial Discharge Permit including any pretreatment requirements and/or limitations.

The project owner shall notify the Energy Commission CPM in writing of any changes to and/or renewal of the permit.

PROPOSED MVPP UNIQUE SOIL AND WATER RESOURCES CONDITIONS

MVPP proposes five unique conditions regarding water to that deal with the MVPP.

UNI-MVPP-WAT-1 (proposed): Limit Lower Aquifer Use to Historical Minimal Levels

Description of unique condition:

MVPP shall limit water from the lower aquifer (Well #1 and Well #2) used for cooling water make-up for both existing and project units to 750 acre/feet per year total.

Protocol:

No Protocol for this Condition

Verification:

1. 60 days prior to commencement of construction, project owner shall submit plans detailing how quantities of water from the lower aquifer, used for cooling, will be measured.
2. The project owner shall provide a status report on the use of annual make-up water from the lower aquifer to the CPM in its annual compliance report.

UNI-MVPP-WAT-2 (proposed): Maximize Use of Middle Aquifer and WWTP Water

Description of unique condition:

MVPP shall maximize use of a mixture of secondary effluent water from the City of Redlands wastewater treatment plant and middle aquifer water, blending the two sources, as necessary to comply with Air Quality conditions limiting MVPP's use of middle aquifer water.

Protocol:

No protocol for this condition

Verification:

The project owner shall provide a status report on the use of the mixture of effluent water from the wastewater treatment plant and middle aquifer water to the CPM in its annual compliance report. The report shall indicate volumetric amounts of water drawn from middle aquifer and volumetric amounts of water obtained from City of Redlands WWTP.

UNI-MVPP-WAT-3 (proposed): DHS Treatment Compliance

Description of unique condition:

Prior to use of any water from the City of Redlands Wastewater Treatment Plant (WWTP), project owner shall ensure such water use complies with all requirements with the proposed Department of Health Services (DHS) regulations regarding treatment requirements for reclaimed water used in cooling towers.

Protocol:

Condition has no protocol.

Verification:

At least 60 days prior to taking any reclaim water from the City of Redlands WWTP. Project owner shall submit a report explaining how compliance of each requirement of the proposed DHS regulations is being met. The report shall indicate the resolution, if any, to issues of applicability and interpretation. The report will indicate where, if any and how, biocidal treatment will be applied to the water.

UNI-MVPP-WAT-4 (proposed): Direct Connection Permit

Description of unique condition:

Prior to discharge to the SARI line, project owner shall obtain from the San Bernardino Municipal Water District, a Direct Connection Permit (DCP) for the SARI line

Protocol:

Condition has no protocol.

Verification:

60 days prior to discharging any liquid to the SARI Line, the project owner shall provide a copy of the DCP to the CPM and to SBRWQCB.

UNI-MVPP-WAT-5 (proposed): SARI Line Discharge Capacity

Description of unique condition:

Project owner shall obtain and maintain adequate discharge capacity in the SARI line at all times following and prior to first discharge to SARI line.

Protocol:

No protocol for this condition

Verification:

At least 60 days prior to discharging any liquid to the SARI Line and thereafter as required in this condition, the project owner shall report:

1. Original capacity and any changes in SARI line capacity owned by the project owner; and,
3. Any suspected need for an increase in discharge requirements greater than existing SARI Line capacity owned and reasons for the change.

UNIQUE SOIL AND WATER RESOURCES CONDITIONS

There have been eighteen unique conditions in the area of soil and water.

UNI-SPP -WAT-1: Use Dry Cooling Only

[SPP-WAT-1]

Triggering situation:

SPP committed to using only dry cooling.

Description of unique condition:

The SPP will utilize a 100 percent dry cooling technology. Wet or wet/dry cooling will not be used.

Protocol:

Condition has no protocol.

Verification:

Once operation has begun, the Calpine shall provide to the CPM in the annual compliance report, a record of the average month groundwater consumption, the monthly average groundwater levels as measured in the project well(s), and the monthly average total dissolved solid (TDS) concentration in the project water supply.

UNI-SPP-WAT-2: No Discharge to Surface Water

[SPP-WAT-2]

Triggering situation:

Sutter Power plant did not seek or have any permits to discharge wastewater streams to surface water.

Description of unique condition:

No project wastewater streams shall be discharged to surface water.

Protocol:

Condition has no protocol.

Verification:

The volume and method of disposal for all wastewater streams shall be provided to the CEC CPM in the annual compliance report.

UNI-SPP-WAT-3: Drainage Plan for Surface Water

[SPP-WAT-6]

Triggering situation:

A drainage plan was required to resolve surface water wastewater discharge risks and

such a plan was not complete and filed prior to project approval.

Description of unique condition:

The project owner shall provide on-site retention of stormwater during periods of high runoff to ensure that the project will not contribute to drainage problems. Periods of high runoff shall be considered 10-year, 24-hour storms or greater. The project owner shall prepare a report evaluating potential effects of stormwater runoff from the project site on downstream drainage facilities. Specifically, this report shall identify the volume of runoff anticipated from the proposed site for the twenty-five and 50-year, 24-hour storm, how this runoff will be accommodated on-site and the ability of the field drains, the North Drain and Pump Plant No. 2 to accommodate these flows, especially during 10-year, 24-hour or greater storms. The plan shall identify any improvements needed to be made to these facilities to ensure their ability to accommodate stormwater flows from the project. The plan shall also verify that the project's use of these drainage facilities and any necessary improvements to them has been coordinated with all public and private entities that own and/or are responsible for the operation and maintenance of all downstream drainage facilities affected by project runoff.

Protocol:

Condition has no protocol.

Verification:

Thirty (30) days prior to the start of construction, the project owner shall submit for review and approval to the CEC CPM and the Sutter County Department of Public Works the proposed drainage plan.

UNI-HD-WAT-4: Limit on Water Source

[HD-WAT-1]

Triggering situation:

Project was permitted for only one source of water.

Description of unique condition:

The only water used for project operation (except for domestic purposes) shall be State Water Project (SWP) water obtained by the project owner consistent with the provisions of the Mojave Water Agency's (MWA) Ordinance 9.

- a. Whenever SWP water is available to be purchased from MWA, the project owner shall use direct delivery of such water for project operation.
- b. Whenever water is not available to be purchased from the MWA, the project owner may use SWP water banked in the seven HDPP wells identified in Figure Number 1 of the Addendum Number 1 to the Evaluation of Alternative Water Supplies for the High Desert Power Project (Bookman-Edmonston 1998) as long as the amount of water used does not exceed the amount of water determined to be available to the project pursuant to SOIL&WATER-5.
- c. If there is no water available to be purchased from the MWA and there is no banked water available to the project, as determined pursuant to SOIL&WATER-5, no groundwater shall be pumped, and the project shall not operate. At the project owner's discretion, dry cooling may be used instead, if an amendment to the Commissions decision allowing dry cooling is approved.
- d. The project shall not use treated water from the Victor Valley Wastewater Authority.
- e. The project's water supply facilities shall be appropriately sized to meet project needs.

Protocol:

Condition has no protocol.

Verification:

The project owner shall provide final design drawings of the project's water supply facilities to the CPM, for review and approval, thirty (30) days before commencing project construction. Verifying compliance with other elements of Condition SOIL & WATER-1 shall be accomplished in accordance with the provisions of the Verifications for Conditions 2, 3, and 6, as appropriate.

UNI-HD-WAT-5: Provide Copy of Storage Agreement

[HD-WAT-2]

Triggering situation:

Project would store water in water basin.

Description of unique condition:

The project owner shall provide a copy of the storage agreement between the Mojave Basin Area Watermaster (Mojave Water Agency) and VVWD prior to the initiation of any groundwater banking, and within fifteen (15) days of any amendment or renewal of the storage agreement.

Protocol:

Condition has no protocol.

Verification:

The project owner shall submit to the CEC CPM a copy of the application for a storage agreement (for the project's cooling water) with the Mojave Basin Area Watermaster at the time the application is filed. The project owner shall submit to the CEC CPM a copy of the approved storage agreement from the Mojave Basin Area Watermaster within fifteen (15) days of receipt of the agreement.

UNI-HD-WAT-6: Provide copy of Will Serve Letter

[HD-WAT-3]

Triggering situation:

Will serve letter required.

Description of unique condition:

The project owner shall provide a copy of a "Will Serve Letter" from VVWD to the CEC CPM prior to the start of commercial operation.

Protocol:

Condition has no protocol.

Verification:

The project owner shall provide a copy of a "Will Serve Letter" from VVWD to the CEC CPM within thirty (30) days of its receipt by the project owner.

UNI-HD-WAT-7: Injection Schedule

[HD-WAT-4]

Triggering situation:

Injection rates and frequency had to be limited to prevent impacts.

Description of unique condition:

Injection Schedule:

- a. The project owner shall inject one thousand (1000) acre-feet of SWP water within twelve (12) months of the commencement of the projects commercial operation.
- b. By the end of the fifth year of commercial operation, the amount of water injected minus the amount of banked groundwater used for project operation, minus the amount of dissipated groundwater shall meet or exceed thirteen thousand (13,000) acre-feet.
- c. After the fifth year of commercial operation and until three (3) years prior to project closure, the project owner shall replace banked groundwater used for project operation as soon as SWP water is available for sale by MWA. The project owner may choose to delay replacement of a limited quantity of banked groundwater used for project operations during aqueduct outages until the cumulative amount of groundwater withdrawn from the bank reaches one thousand (1,000) acre-feet. Once the limit of one thousand (1,000) acre-feet has been reached, the project owner shall replace banked groundwater used for project operation during aqueduct outages as soon as SWP water is available for sale by MWA.

Protocol:

Condition has no protocol.

Verification:

During the period beginning eighteen (18) months after the start of rough grading and concluding at the end of the first month after one full year (12 months) of commercial operation, the project owner shall provide a monthly report to the CEC CPM and to the CDFG on the progress of construction of the project wells, and shall identify the amount of SWP water injected and the amount of groundwater pumped during the previous month. The CEC CPM shall provide notice that this material has been submitted to those identified on the project's compliance mailing list.

After the end of the first month after one full year (12 months) of commercial operation, the project owner shall submit to the CEC CPM and to the CDFG in writing, on a quarterly basis, a monthly accounting of all groundwater pumped and all SWP water treated and injected for the preceding quarter. Within thirty (30) days of receipt of the approved annual storage agreement, pursuant to SOIL&WATER-2, the project owner shall submit to the CEC CPM and to the CDFG an annual written estimate of the anticipated amount of SWP water that will be banked and the anticipated amount of groundwater that will be pumped in the coming year. If the amount of banked groundwater available to the project is less than one (1) year's supply plus one thousand (1,000) acre-feet, quarterly estimates of anticipated injection and withdrawal will be required. The CEC CPM shall provide notice that this material has been submitted to those identified on the project's compliance mailing list.

CEC Staff shall use this information in the HDPP model to evaluate the amount of banked groundwater available and to calculate the approximate rate of decay. CEC Staff shall notify the project owner within thirty (30) days of the amount of banked groundwater available to be pumped in the new calendar year or in the next quarter, if applicable.

UNI-HD-WAT-8: Calculation of Banked Water Balance

[HD-WAT-5]

Triggering situation:

Because project relied on banking water it needed to ensure banked water balance was monitored.

Description of unique condition:

Calculation of Balance:

- a. The amount of banked groundwater available to the project shall be calculated by the CEC staff using the HDPP model, FEMFLOW3D. The amount of banked groundwater available shall be updated on a calendar year basis by the CEC staff, taking into account the amount of groundwater pumped by the project during the preceding year and the amount of water banked by the project during the preceding year.
- b. When calculating the amount of banked groundwater available to the project, CEC staff shall subtract any amount of water that is produced by Victor Valley Water District (VVWD) from the project wells for purposes other than use by the project that exceeds the baseline, as defined in SOIL&WATER-17(1).
- c. Each annual model run shall simulate the actual sequence of historic pumping and injection since the injection program began. From the model runs, the CEC Staff shall determine the amount of groundwater available for each new calendar year. If the amount of banked groundwater available to the project is less than one (1) year's supply plus 1,000 acre-feet, the CEC Staff shall determine the amount of groundwater available to the project on a quarterly basis.

Protocol:

Condition has no protocol.

Verification:

During the period beginning eighteen (18) months after the start of rough grading and concluding at the end of the first month after one full year (12 months) of commercial operation, the project owner shall provide a monthly report to the CEC CPM and to the CDFG on the progress of construction of the project wells, and shall identify the amount of SWP water injected and the amount of groundwater pumped during the previous month. The CEC CPM shall provide notice that this material has been submitted to those identified on the project's compliance mailing list.

After the end of the first month after one full year (12 months) of commercial operation, the project owner shall submit to the CEC CPM and to the CDFG in writing, on a quarterly basis, a monthly accounting of all groundwater pumped and all SWP water treated and injected for the preceding quarter. Within thirty (30) days of receipt of the approved annual storage agreement, pursuant to SOIL&WATER-2, the project owner shall submit to the CEC CPM and to the CDFG an annual written estimate of the anticipated amount of SWP water that will be banked and the anticipated amount of groundwater that will be pumped in the coming year. If the amount of banked groundwater available to the project is less than one (1) year's supply plus one thousand (1,000) acre-feet, quarterly estimates of anticipated injection and withdrawal will be required. The CEC CPM shall provide notice that this material has been submitted to those identified on the project's compliance mailing list.

CEC Staff shall use this information in the HDPP model to evaluate the amount of banked groundwater available and to calculate the approximate rate of decay. CEC Staff shall notify the project owner within thirty (30) days of the amount of banked groundwater available to be pumped in the new calendar year or in the next quarter, if applicable.

UNI-HD-WAT-9: Banked Water Use

[HD-WAT-6]

Triggering situation:

Banked water use had to be monitored to ensure it did not exceed banked water use.

Description of unique condition:

Banked Water Available for Project Use:

- a. The amount of banked groundwater available to the project during the first twelve (12) months of commercial operation is the amount of SWP water injected by the project owner into the High Desert Power Project (project) wells, minus the amount of groundwater pumped by the project owner, minus the amount of dissipated groundwater, and minus any amount described in SOIL&WATER-5(b).
- b. The amount of banked groundwater available to the project after the first twelve (12) months of commercial operation is the amount of SWP water injected by the project owner into the project wells, minus the amount of groundwater pumped by the project owner, minus the amount of dissipated groundwater, minus one thousand (1,000) acre feet, and minus any amount described in SOIL&WATER-5 (b).
- c. During the three (3) years prior to project closure, the project owner may withdraw the balance of banked groundwater determined to be available to the project, except for one thousand (1,000) acre-feet, pursuant to SOIL&WATER-5. The project owner is not required to replace this final withdrawal of groundwater. However, during the three (3) years prior to project closure, at no time may the balance of banked groundwater decline below one thousand (1,000) acre-feet. Furthermore, there must be a remaining balance of one thousand (1,000) acre-feet banked in the groundwater system at closure, as determined to be available to the project pursuant to SOIL&WATER-5. This balance of one thousand (1,000) acre-feet must remain in the groundwater system, and the project owner, by contract or other conveyance, may not transfer the rights to this balance.
- d. The project shall not operate for longer than thirty (30) years unless the Commission has approved an amendment to its license that specifically evaluates the water resources impacts of continued operation and imposes any mitigation necessary to ameliorate any identified impacts.
- e. No water is available for project use if the requirements of SOIL&WATER-4 are not met by the project owner.

Protocol:

Condition has no protocol.

Verification:

The project owner shall use the same verification as for SOIL&WATER-5; however, in addition, any facility closure plan submitted during that last three (3) years of commercial operation shall address the disposition of any remaining water available to the project, as well as the disposition of the water treatment facility.

UNI-HD-WAT-10: Maintain Operational Control of Water Treatment Facility

[HD-WAT-7]

Triggering situation:

Project owner was permitted as owning the water treatment facility.

Description of unique condition:

The project owner shall retain ownership and operational control of the water treatment facility.

Protocol:

Condition has no protocol.

Verification:

Should the project owner choose to transfer ownership or operational control of the water treatment facility, it must apply for an amendment to the Energy Commission Decision, and include an evaluation of any environmental effects associated with the transfer of ownership or operational control to another entity.

UNI-HD-WAT-11: Monitor Aquifer Hydraulic Parameters

[HD-WAT-8]

Triggering situation:

Monitoring of aquifer hydraulic parameters was necessary to ensure no impacts to aquifer.

Description of unique condition:

The project owner shall conduct pumping tests in all project wells to establish *in situ* hydraulic parameters including transmissivity and storativity in the Regional Aquifer. From these parameters and the project well-log data, the project owner shall calculate the following site-specific values:

- effective horizontal hydraulic conductivity
- effective vertical hydraulic conductivity
- specific yield, if pumping tests indicate the aquifer is unconfined, or
- specific storage, if aquifer is confined.

Prior to conducting the pumping test, the project owner shall submit a work plan detailing the methodology to be used to conduct the proposed pumping tests and to calculate the specified parameters and values to the CEC CPM and to the CDFG for review and approval.

Based upon the information generated by the pumping tests, CEC Staff shall revise the HDPP model to reflect the results of the pumping tests. All modeling runs referred to in SOIL&WATER-5 shall incorporate the results of these pumping tests, following approval by the CEC CPM determined pursuant to this Condition.

Protocol:

The pumping tests shall provide data to calculate the *in situ* hydraulic parameters of the Regional Aquifer.

- At a minimum the pumping tests for all HDPP wells shall include the measurement of drawdown in at least one (1) non-pumping (observation) well that is screened at the same depth as the pumping well.
- Observation well(s) for each pumping test must be sufficiently close to the pumping well that pumping produces measurable drawdown of sufficient duration in the observation well(s) to analyze the site-specific hydraulic parameters including transmissivity and storativity in the Regional Aquifer.
- In addition, if the observation well data indicates a slow release of groundwater from storage, the pumping test shall be extended until the release from storage can be observed to stabilize in a plot of the data from the observation well(s). (For a description of the

evaluation of storativity under slow release conditions, see Driscoll, F.G., 1986, Groundwater and Wells, H.M. Smyth, Inc., p. 229-230).

- Single well pumping tests and pumping tests that do not produce enough measurable drawdown in observation wells to conclusively calculate hydraulic parameters will not meet the Conditions of Certification.

Verification:

The project owner shall submit to the CEC CPM and to the CDFG, six (6) months prior to the start of pumping tests, the work plan that details the methodology for conducting the proposed pumping tests on the seven (7) HP wells and for calculating the specified parameters and values. With the approval of the work plan by the CEC CPM, in consultation with the CDFG, the project owner shall perform the pumping tests following the CEC protocol. The CEC CPM shall provide notice that this material has been submitted to those identified on the project's compliance mailing list.

Within two (2) months after the completion of pumping tests, the project owner shall submit to the CEC CPM and to the CDFG a report detailing how the pumping tests were conducted and the results of the tests, including the calculation of: (1) the *in situ* hydraulic parameters of transmissivity and storativity for the Regional Aquifer; and (2) the site-specific values of effective horizontal hydraulic conductivity, effective vertical hydraulic conductivity, and specific yield and/or specific storage.

The CEC CPM shall provide notice that this material has been submitted to those identified on the project's compliance mailing list.

UNI-HD-WAT-12: Use HDPP Model to Monitor Hydraulic Conductivity of Aquifer [HD-WAT-9]

Triggering situation:

Use of model was required to ensure accurate information

Description of unique condition:

The project owner shall modify the HDPP model grid to accommodate the representation of gradational changes in the hydraulic conductivity of the Regional Aquifer, in conformance with the USGS Mojave River Groundwater Basin model. The CEC Staff shall revise the HDPP model, using the modified grid, to incorporate the gradational changes in the hydraulic conductivity of the Regional Aquifer represented in the USGS Mojave River Groundwater Basin model.

All modeling runs referred to in SOIL&WATER-5 shall incorporate the modifications of the model along with the model information obtained from the USGS following approval by the CEC CPM determined pursuant to this Condition.

Protocol:

Condition has no protocol.

Verification:

The project owner shall submit the modified model grid input files (including updated versions of any other input files that are effected by the modification of the grid) within two (2) months after the construction of the HDPP wells to the CEC Staff for review and approval, in consultation with the CDFG. The CEC CPM shall provide notice that this material has been submitted to those identified on the project's compliance mailing list.

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UNI-HD-WAT-13: Groundwater Level Monitoring

[HD-WAT-10]

Triggering situation:

Groundwater levels required monitoring to ensure no impacts from operation.

Description of unique condition:

The project owner shall prepare an annual report describing groundwater level monitoring performed as follows. The project owner shall monitor groundwater levels in all project wells, in VVWD wells 21, 27, 32, and 37, in Adelanto wells 4 and 8a, and in all other wells within a one (1) mile radius of the project wells. Groundwater monitoring shall also be conducted within the Mojave River Aquifer Alluvium. Additional monitoring wells specified by VVWD for the evaluation of well interference within Pressure Zone 2 shall also be included. Monitoring shall be performed on a quarterly basis starting within six (6) months after the start of rough grading.

Protocol:

Condition has no protocol.

Verification:

The project owner shall annually submit a copy of the groundwater level monitoring report to the CEC CPM, the CDFG, the MWA, and the VVWD. The CEC CPM shall provide notice that this material has been submitted to those identified on the project compliance mailing list.

UNI-HD-WAT-14: Approved Water Treatment and Monitoring Plan

[HD-WAT-13]

Triggering situation:

Water treatment required ensuring no impacts to groundwater

Description of unique condition:

The project owner shall implement the approved water treatment and monitoring plan. All banked SWP water shall be treated to meet local groundwater conditions as identified in Condition SOIL&WATER-12. Treatment levels may be revised by the CEC and, if applicable, by the RWQCB, based upon changes in local groundwater quality identified in the monitoring program not attributable to the groundwater-banking program.

Monitoring results shall be submitted annually to the CEC CPM and, if applicable, to the RWQCB.

Protocol:

Condition has no protocol.

Verification:

The project owner shall annually submit monitoring results as specified in the approved plan to the CEC CPM. The project owner shall identify any proposed changes to SWP water treatment levels for review and approval by the CEC and, if appropriate, the Lahontan RWQCB. The project owner shall notify the RWQCB, the VVWD, and the CEC CPM of the injection of any inadequately treated SWP water into the aquifer due to an upset in the treatment process or for other reasons. Monitoring results shall be submitted to the CEC CPM.

UNI-HD-WAT-15: Provide Access for Site Clean Up Efforts of Air Force

[HD-WAT-14]

Triggering situation:

Air Force required access to ensure site characterization and remediation of site.

Description of unique condition:

The project owner shall provide access to the United States Air Force for all efforts to characterize and remediate all soil and groundwater contamination at the power plant site.

Protocol:

Condition has no protocol.

Verification:

The project owner shall submit, in writing, a copy within two (2) weeks of receipt of any request from the Air Force for site access to characterize or remediate contaminated soil and/or groundwater to the CEC CPM.

UNI-HD-WAT-16: Aquifer Storage and Recovery Agreement Required

[HD-WAT-17]

Triggering situation:

Project depends on aquifer storage and recovery.

Description of unique condition:

The project owner shall enter into an Aquifer Storage and Recovery Agreement with the Victor Valley Water District (VVWD). This agreement shall contain the following conditions:

- 1) It shall prohibit VVWD from producing or allowing others to produce water from project wells, except that VVWD may produce water from project wells: (i) for use by the HDPP project pursuant to SOIL&WATER-1; and (ii) for purposes other than use by the HDPP project pursuant to SOIL&WATER-1 provided that such production, in combination with production from the VVWD wells identified in "c" below does not exceed the amount identified as "the baseline", as defined in a below.
 - a. The contract shall define the baseline as the average aggregated annual production of the wells identified in "c" during the immediately preceding five (5) years. The contract shall state that any water produced by VVWD pursuant to (ii) above shall be included in subsequent calculations of the baseline only if that production does not exceed the baseline for the calendar year in which the production occurs, as required by this Condition.
 - b. The contract shall require VVWD to establish the first baseline using the five (5) calendar years preceding the operation of the project wells, and shall re-calculate the baseline on a calendar year basis by January 15 of each year.
 - c. The contract shall state that "wells identified in "c" means VVWD wells that are located in a corridor two (2) to two and one half (2½) miles wide adjacent to and west of the river s western bank including all wells within the following land sections: • Within Township 6 North, Range 4 West, sections 31, 32, 33, and 34.
 - Within Township 5 North, Range 4 West, sections 4, 5, the east of 8, 9, 10, 15, 16, the east of 21, 22, 23, 25, 26, 27, the east of 28, the east of 33, 34, 35, and 36.
- 2) It shall state that the project owner shall provide to the CEC CPM and CDFG on a quarterly basis a monthly accounting of: 1) all water pumped from project wells that is

supplied to the project owner; and 2) water pumped from project wells that is supplied to VVWD.

3) It shall state that VVWD shall provide to the CEC CPM and CDFG a baseline calculation no later than January 15 of each year. 4) The contract may include terms that require VVWD to compensate HDPP for any costs associated with subtractions from the amount of banked groundwater available to HDPP under the terms of SOIL&WATER-5(c).

Protocol:

Condition has no protocol.

Verification:

The project owner shall provide to the CEC CPM and CDFG a copy of a signed Aquifer Storage and Recovery Agreement with the terms described above prior to commencing construction of the project. Any amendments to this agreement shall be approved by the CEC CPM thirty (30) days prior to the effective date of the amendment. The CEC CPM shall provide notice that this material has been submitted to those identified on the project's compliance mailing list.

UNI-HD-WAT-17: Use Flow Meters on Wells and Delivery Systems

[HD-WAT-18]

Triggering situation:

Project required flow meters on wells and delivery systems

Description of unique condition:

The project owner shall ensure that flow meters are installed on project wells such that the total amount of water injected and produced on a monthly basis can be determined. In addition, the project owner shall ensure that separate flow meters are installed on: 1) that portion of the water delivery system that is dedicated to providing water to the project owner; and 2) on that portion of the water delivery system that will be used to provide water to VVWD pursuant to SOIL&WATER-17.1(ii).

Protocol:

Condition has no protocol.

Verification:

The project owner shall provide to the CEC CPM and CDFG on a quarterly basis a monthly accounting of: 1) all groundwater injected into project wells; 2) water pumped from project wells that is supplied to the project owner; and 3) water pumped from project wells that is supplied to VVWD. The CEC CPM shall provide notice that this material has been submitted to those identified on the project's compliance mailing list.

UNI-HD-WAT-18: Limits On Use of Water Treatment Facilities

[HD-WAT-19]

Triggering situation:

Water treatment facilities not permitted for all possible uses.

Description of unique condition:

The project owner shall limit any use of water treatment facilities by VVWD or another entity, for purposes other than providing water to the HDPP, to treating SWP water for injection into the regional aquifer. The project owner shall not allow VVWD or another

entity to use the water treatment facility for treatment of water that is injected and then recovered by VVWD unless the watermaster and VVWD have entered into a water storage agreement, and for which the appropriate lead agency has completed a CEQA review as required by MWA Ordinance 9. Any water injected by VVWD shall not increase the baseline pursuant to SOIL&WATER-17.1). The project owner shall not enter into any contract or amend any existing contract to allow VVWD or another entity to use the water treatment facility for domestic purposes, unless the Energy Commission has approved an amendment to the project Decision allowing such use.

Protocol:

Condition has no protocol.

Verification:

The project owner shall provide to the CEC CPM and CDFG a copy of any water storage agreement between the watermaster and VVWD within thirty (30) days of its execution, which incorporates these restrictions. The CEC CPM shall provide notice that this material has been submitted to those identified on the project's compliance mailing list.

MVPP's SOIL AND WATER RESOURCES ANALYSIS

INTRODUCTION

Below MVPC presents its analysis of impacts, mitigation and LORS compliance for MVPP in the area of soil and water resources.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Federal

The Clean Water Act (CWA) authorizes the EPA to regulate discharges of wastewater and stormwater into surface waters by using NPDES permits and pretreatment standards. The SWRCS and nine RWQCBs implement these permits at the state level. The CWA requires the control of soil erosion during construction through the preparation and execution of site-specific soil erosion control plans.

The United States Department of Agriculture (USDA) *National Engineering Handbook* (1983) prescribes standards of technical excellence for the planning, design, and construction of soil conservation practices. The administering agency for the above authority is the NRCS (formerly known as the Soil Conservation Service).

The Clean Water Act (33 U.S.C., sections 1251 et seq.) protects the surface waters of the U.S. by restoring and maintaining the chemical, physical, and biological properties of these waters. The Clean Water Act authorizes the EPA to regulate 1) discharges of wastewater and stormwater into surface waters by requiring NPDES permits for direct discharges to waters of the U.S. and 2) pretreatment standards for discharges made to publicly owned treatment works. The SWRCB implements these permits at the state level.

State

Water quality is regulated under California's Porter-Cologne Water Quality Control Act, which established a statewide system for water pollution control (Water Code sections 13000 et seq.). The Act requires adequate protection of water quality by appropriate designing, sizing, and construction of erosion and sediment controls. Discharge of waste earthen material resulting from land disturbance with the potential to affect the quality of the waters of the state, requires the issuance of waste discharge requirements. The SWRCB and the Santa Ana RWQCB are the principal agencies responsible for control of water quality and issuing permits. The SWRCB's General Construction Permit requires that a facility prepare a Storm Water Pollution Prevention Plan and a Monitoring Plan.

CEQA (Appendix G) requires assessment of the potential affects on state prime agricultural lands. The CEQA guidelines specify that a project will have a significant effect on the environment if it will "cause substantial flooding, erosion or siltation" or "convert prime agricultural land to non-agricultural use or impair the agricultural productivity of prime agricultural lands." The administering agency for this project for CEQA is the CEC.

The Porter-Cologne Water Quality Control Act of 1972 (Water Code, sections 13000 et seq.) established jurisdiction of nine regional water quality control boards (RWQCBs) to control pollutant discharges to surface and groundwaters. The Santa Ana RWQCB is the local enforcement agency for the project site.

SWRCB Water Quality Order Number 91-B-DWQ, General Permit No. CAS000001, authorizes a general permit to regulate industrial stormwater discharges. A notice of intent will be filed with the Santa Ana RWQCB prior to commencement of construction activities. A Stormwater Pollution Prevention Plan (SWPPP) produced in accordance with the guidelines of the federal NPDES permit requirements, and addressing both construction and operations stormwater will identify Best Management Practices to be employed at the facility to prevent stormwater pollution during the projects operating lifetime. A draft has already been provided to the CEC staff.

SWRCB Water Quality Order Number 92-08-DWQ, General Permit No. CAS000002, authorizes a general permit for stormwater discharges associated with construction activity disturbing more than five acres.

Local

Local agriculture and soils LORS applicable to the power plant site are outlined in the County of San Bernardino General Plan or the City of Redlands General Plan, if the power plant site is annexed. Both general plans favor development that incorporates the conservation of soil. The County of San Bernardino Development Code, Chapter 10, sections 87.1010 through 87.1070 outline grading compliance procedures related to soil erosion control, slope ratio, slope height, or other conditions of approval to control grading. The City of Redlands does not have specific LORS relating to agriculture and

soils. However, grading permits obtained from the City of Redlands, will outline requirements relating to soil erosion control.

There are no applicable agriculture and soils LORS related to pipeline construction. However, as discussed in Section 6.5 (Traffic and Transportation), excavation and/or encroachment permits will be required prior to pipeline construction. Generally, these permits outline conditions related to soil erosion control and prevention of stormwater runoff.

SETTING

The proposed facility will be located on an existing facility currently being annexed by the City of Redlands in San Bernardino County. The project site consists of a total of 64 acres located adjacent to the Santa Ana River. The existing facility consists of two steam boiler generating units that feed into an immediately adjacent Southern California Edison (SCE) transmission facility and substation. The two existing units utilize groundwater in cooling towers for cooling purposes and provide a nominal gross output of 66 MW each. The proposed new facility will utilize 18.7 already hardpacked or paved acres of the site, mostly to the North of the existing facility.

The area can be best described as an industrial region with other industrial areas and a mixture of residential and commercial zones nearby. To the North of site lies the Santa Ana River, dry most of the year, which has numerous other industrial and commercial facilities along its side. Directly across the Santa Ana River is the former Norton Air Force Base, now the San Bernardino International Airport. It primarily serves as a commercial airport with large cargo planes flying in and out on a regular basis. The Santa Ana River itself has been highly disturbed, with reinforced or concrete channel banks, numerous surface mining operations going on to the North within the river bed. To the East of the Site lie agricultural land and a water treatment facility. To the South lies agricultural land followed by the Highway -10 freeway. To the west lie commercial, light industrial and residential areas. The residential area is an small enclave to the Southwest of the facility.

The hydrologic setting of the plant consists of three major water-bearing zones. These water-bearing zones include the upper, middle and lower aquifers. The two onsite production wells produce groundwater from the lower water-bearing zone.

IMPACTS

Affected Environment

The MVPC facility is located between the Cities of San Bernardino and Redlands and is currently being annexed into the City of Redlands. Redevelopment activities will be conducted on the existing power plant site. A portion of the planned expansion will extend into the SCE parcel and displace approximately 4.25 acres currently leased for agricultural production. The project includes a 17-mile natural gas pipeline, and a 1,100-foot wastewater connector pipeline. The gas pipeline will be installed underground and

within existing streets. The 1,100-foot wastewater connector will require a connection from an existing out-of-use water line that ends within the San Bernardino Public Golf Course property adjacent to the east of the Twin Creek Channel. It is estimated that less than 0.25 acres of previously disturbed golf course lands will be affected during wastewater pipeline connector installation.

MITIGATION

A detailed Erosion Control Plan will be prepared prior to construction with the plan implemented during and following construction. Sediment control measures may include, but are not limited to, use of mulches, protective coverings, installation of culverts under drainage crossings, installation of sediment detention basins, construction of water diversion along roads, water bars along pipeline rights-of-way, dust suppression watering, etc.

Grading operations will be conducted in compliance with the City of Redlands Planning Department.

Construction activities will be conducted in accordance with the SWPPP and associated monitoring program, which will be required for the project in accordance with California's General Industrial Storm Water Permit for Construction Sites under EPA's NPDES program. The SWPPP will include erosion control measures, including best management practices to reduce erosion and sedimentation.

Sediment barriers, such as straw bails or silt fences, that slow runoff and trap sediment, may be used near river crossings. Sediment barriers are generally placed below, or down gradient of disturbed areas, at the base of exposed slopes, and along streets and property lines below the disturbed area. Barriers will be placed around the property of the expanded MVPC facility to prevent sediment from leaving the site. If used, straw bales will be removed or used as mulch after construction because they tend to break up and clog storm drains if left in place indefinitely. Because the MVPC site is relatively level, standard surface erosion control techniques should be effective. The need for runoff retention basins, drainage diversions, and other large-scale sediment traps is not anticipated because of the level topography and surrounding paved areas. Soil stockpiles will be stabilized and covered if left on site for long periods of time. These techniques can be employed for construction of the water supply pipeline and the natural gas pipeline.

Disturbed areas that will not be covered with surface structures or pavement following grading will be stabilized.

Areas of sensitive land, such as residential agriculture uses, along the proposed pipeline alignments, will be additionally protected by more stringent soil erosion control measures. This will reduce human impacts and impacts to potentially dust-sensitive crops (such as strawberries).

During construction of the MVPC expansion and the proposed pipelines, dust erosion control measures will be employed to minimize the wind-blown erosion of soil from the construction areas. Water of quality equal to or better than either existing surface runoff will be sprayed on the soil in construction areas to control dust and during revegetation.

Cumulative Impacts

Potential cumulative impacts include temporary and permanent soil disturbance that could potentially accelerate wind and water induced erosion and other existing and proposed projects that could increase the demand of groundwater from the Bunker Hill Basin.

MVPC plans to implement SWPP and other measures to prevent cumulative erosion and sediment impacts. Therefore, the proposed project is not expected to contribute to cumulative erosion and sedimentation impacts.

The middle aquifer is poorer quality water that can only be used for drinking water after substantial filtration due principally to perchlorate and TCE (tri chlorine ethylene) contamination. Use of this contaminated water is, therefore, consistent with the requirements of SWRCB No 75-58. MVPP will locate on site and in the same approximate locations as it would have located wells in the lower aquifer, two new 50% wells that will have the capacity to supply 100% of make-up water needs. Such filtration as may be necessary to remove TCE will be installed at the plant and blending of lower aquifer water will be employed to maintain a level of less than 16 lbs. per year of TCE evaporation per cooling tower. This method of blending will avoid impact issues associated with use of the lower aquifer as well as assurance that the MVPP will comply with State water policies.

FACILITY CLOSURE

Typically, facility closure raises concerns in regard to potential erosion. After the power plant facility has reached the end of its useful life, including modernization, upgrades, etc., it would likely be removed from service and demolished prior to redevelopment for another use. Because there are no significant cuts and fill slopes associated with the facility, erosion is not considered a significant concern to the project.

The effects on water resources are expected to be minimal during facility closure. The water demand of the plant will become available for other uses in the area or, if groundwater overdraft is a problem, the groundwater extraction for MVPC use could be terminated and the extra water available could be left in the aquifer. The secondary effluent water from the City of Redlands WWTP would be available for some other non-potable use in the area. The occasional process water discharges that would occur during plant upsets would no longer occur, reducing the volume of water requiring treatment being discharged to the brine line sewer system at the Orange County Sanitation District's Fountain Valley Wastewater Treatment Plant.

Onsite water wells could be turned over to a future user or be abandoned in accordance with County of San Bernardino or City of Redlands regulations.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions:

MVPP, as designed and mitigated, will comply with all LORS. By using reclaimed and middle aquifer water, there are no aquifer impact issues, and is, furthermore, in harmony with State water policies.

Recommendations:

The conditions stipulated below should be implemented to ensure that the MVPP complies with all LORS and has no significant, unmitigated impacts.

MVPP'S CONDITIONS ANALYSIS

MVPP is a natural gas combine cycle project very similar to previously permitted projects. It requires the same three standard conditions as have all previously permitted projects. The disposition of all past conditions is presented here. There are several unique circumstances requiring new conditions.

DISPOSITION OF STANDARD CONDITIONS

STAN-WAT-1: Applicable

This condition requires the project owner to submit an Erosion Control and Storm Water Management Plan for review and Energy Commission staff approval. The final plan is to contain all the elements of the draft plan with changes made to address the final design of the project. This condition is applicable to the MVPP and as such MVPC stipulates to this condition as it ensures compliance with applicable LORS.

STAN-WAT-2: Applicable

This condition requires the project owner to develop and implement a Storm Water Pollution Prevention Plan prior to beginning any clearing, grading, or excavation activities associated with project construction. This condition is applicable to the MVPP and as such MVPC stipulates to this condition as it ensures compliance with applicable LORS.

STAN-WAT-3: Applicable

This standard conditions requires the project owner to, at least 60 days prior to commercial operation, submit a notice of intent to the State Water Resources Control Board to indicate that the project will operate under provisions of the General Industrial Activity Storm Water Permit. This condition is applicable to the MVPP, MVPC stipulates to the appropriately modified condition. However, it requires modification to match the fact that the facility is an existing power plant with an existing NPDES and SWPP.

DISPOSITION OF CATEGORICAL CONDITIONS

There are three categorical conditions in the area of soil and water, two dealing with reclaim water and one dealing with wastewater treatment facility

CAT-WAT-1: Not Needed

This condition requires the project owner to use tertiary treated effluent cooling water make-up whenever possible. A similar condition is proposed as a new needed condition that better fits the unique circumstances of MVPP.

CAT-WAT-2: Not Needed

This condition required the project owner to obtain an Industrial Discharge Permit from the Sanitation District prior to the discharge of the project's wastewater to the area Wastewater Treatment Facility.

DISPOSITION OF UNIQUE CONDITIONS

UNI-SPP -WAT-1: Not Needed

This condition required the SPP to utilize a 100 percent dry cooling technology. This condition is not applicable to the MVPP for reasons previously identified, or more specifically, because the MVPP is not utilizing dry cooling technology.

UNI-SPP-WAT-2: Not Needed

This condition required the project not to discharge to surface water any wastewater.

UNI-SPP-WAT-3: Not Needed

This condition requires the project owner to provide on-site retention of stormwater during periods of high runoff to ensure that the project will not contribute to drainage problems. It further required the project owner to prepare a report evaluating potential effects of stormwater runoff from the project site on downstream drainage facilities.

UNI-HD-WAT-4: Not Needed

This condition required that the only water used for project operation (except for domestic purposes) be State Water Project (SWP) water obtained by the project owner consistent with the provisions of the Mojave Water Agency's (MWA) Ordinance 9. A similar condition is proposed below as a new needed condition that better fits MVPP's unique circumstance.

UNI-HD-WAT-5: Not Needed

This condition required the project owner to provide a copy of the storage agreement between the Mojave Basin Area Watermaster (Mojave Water Agency) and VVWD prior to the initiation of any groundwater banking, and with in fifteen (15) days of any amendment or renewal of the storage agreement.

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UNI-HD-WAT-6: Not Needed

This condition required the project owner to provide a copy of a "Will Serve Letter" from VVWD to the CEC CPM prior to the start of commercial operation.

UNI-HD-WAT-7: Not Needed

This condition set forth injection rates and frequency, which was limited to prevent impacts.

UNI-HD-WAT-8: Not Needed

This condition required calculation of banked water as it was needed to ensure the banked water balance was monitored.

UNI-HD-WAT-9: Not Needed

This condition required that banked water use be monitored to ensure it did not exceed banked water use.

UNI-HD-WAT-10: Not Needed

This condition required the project owner to retain ownership and operational control of the water treatment facility.

UNI-HD-WAT-11: Not Needed

This condition required the project owner to conduct pumping tests in all project wells to establish *in situ* hydraulic parameters including transmissivity and storativity in the Regional Aquifer.

UNI-HD-WAT-12: Not Needed

This condition required the project owner to modify the HDPP model grid to accommodate the representation of gradational changes in the hydraulic conductivity of the Regional Aquifer, in conformance with the USGS Mojave River Groundwater Basin model.

UNI-HD-WAT-13: Not Needed

This condition required the project owner to prepare an annual report describing groundwater level monitoring

UNI-HD-WAT-14: Not Needed

This condition required the project owner to implement the approved water treatment and monitoring plan.

UNI-HD-WAT-15: Not Needed

This condition required the project owner to provide access to the United States Air Force for efforts to characterize and remediate soil and groundwater contamination at the power plant site.

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UNI-HD-WAT-16: Not Needed

This condition required the project owner to enter into an Aquifer Storage and Recovery Agreement with the Victor Valley Water District (VVWD).

UNI-HD-WAT-17: Applicable

This condition required the project owner to ensure that flow meters were installed on project wells such that the total amount of water injected and produced on a monthly basis could be determined. In addition, the project owner was to ensure that separate flow meters were installed on that portion of the water delivery system that is dedicated to providing water to the project owner; and, on that portion of the water delivery system that will be used to provide water to VVWD pursuant to SOIL&WATER-17.1(ii). This condition is applicable to MVPP as it will require monitoring of water usage; therefore, flow meters are appropriate.

UNI-HD-WAT-18: Not Needed

This condition required the project owner to limit any use of water treatment facilities by VVWD or another entity, for purposes other than providing water to the HDPP, to treating SWP water for injection into the regional aquifer.

NEW NEEDED CONDITIONS

UNI-MVPP-WAT-1 (proposed): Limit Lower Aquifer Use to Historical Minimal Levels

MVPP shall limit water from the lower aquifer (Well #1 and Well #2) used for cooling water make-up for both existing and project units to 750 acre/feet per year total.

Protocol:

No Protocol for this Condition

Verification:

- 60 days prior to commencement of construction, project owner shall submit plans detailing how quantities of water from the lower aquifer, used for cooling, will be measured.
- The project owner shall provide a status report on the use of annual make-up water from the lower aquifer to the CPM in its annual compliance report.

UNI-MVPP-WAT-2 (proposed): Maximize Use of Middle Aquifer & WWTP Water
Description of unique condition:

MVPP shall maximize use of a mixture of secondary effluent water from the City of Redlands wastewater treatment plant and middle aquifer water, blending the two sources, as necessary to comply with Air Quality conditions limiting MVPP's use of middle aquifer water.

Protocol:

No protocol for this condition

Verification:

The project owner shall provide a status report on the use of the mixture of effluent water from the wastewater treatment plant and middle aquifer water to the CPM in its annual

compliance report. The report shall indicate volumetric amounts of water drawn from middle aquifer and volumetric amounts of water obtained from City of Redlands WWTP.

UNI-MVPP-WAT-3 (proposed): DHS Treatment Compliance

Description of unique condition:

Prior to use of any water from the City of Redlands Wastewater Treatment Plant (WWTP), project owner shall ensure such water use complies with all requirements with the proposed Department of Health Services (DHS) regulations regarding treatment requirements for reclaimed water used in cooling towers.

Protocol:

Condition has no protocol.

Verification:

At least 60 days prior to taking any reclaim water from the City of Redlands WWTP. Project owner shall submit a report explaining how compliance of each requirement of the proposed DHS regulations is being met. The report shall indicate the resolution, if any, to issues of applicability and interpretation. The report will indicate where, if any and how, biocidal treatment will be applied to the water.

UNI-MVPP-WAT-4 (proposed): Direct Connection Permit

Description of unique condition:

Prior to discharge to the SARI line, project owner shall obtain from the Fountain Valley Water Treatment Facility, a Direct Connection Permit (DCP) for the SARI line

Protocol:

Condition has no protocol.

Verification:

60 days prior to discharging any liquid to the SARI Line, the project owner shall provide a copy of the DCP to the CPM and to SBRWQCB.

UNI-MVPP-WAT-5 (proposed): SARI Line Discharge Capacity

Description of unique condition:

Project owner shall obtain and maintain adequate discharge capacity in the SARI line at all times following and prior to first discharge to SARI line.

Protocol:

No protocol for this condition

Verification:

At least 60 days prior to discharging any liquid to the SARI Line and thereafter as required in this condition, the project owner shall report:

- Original capacity and any changes in SARI line capacity owned by the project owner; and,
- Any suspected need for an increase in discharge requirements greater than existing SARI Line capacity owned and reasons for the change.

MVPC'S STIPULATED CONDITIONS OF CERTIFICATION

MVPC stipulates to the following conditions:

WAT-1: Final Erosion Control & Revegetation Plan

Prior to the initiation of any earth moving activities, the project owner shall submit an Erosion Control and Storm Water Management Plan for City of Redlands review and Energy Commission staff approval. The final plan shall contain all the elements of the draft plan with changes made to address the final design of the project.

Verification:

The final Erosion Control and Storm Water Management Plan shall address all comments of the City of Redlands Planning Department and be submitted to the Energy Commission CPM for approval at least 30 days prior to the initiation of any earth moving activities.

WAT-2: Storm Water Pollution Prevention Plan

Prior to beginning any clearing, grading, or excavation activities associated with project construction, the project owner will develop and implement a Storm Water Pollution Prevention Plan.

Verification:

At least 30 days prior to the start of construction, the project owner will submit to the Energy Commission Compliance Project Manager (CPM) a copy of the SWPPP.

WAT-3: General Industrial Activities Storm Water Permit

Project owner will discard and submit request existing NPDES to operate SARWCB under provisions of the General Industrial Activity Storm Water Permit. SARWCB will submit notice of intent to the State Water Resource Control Board.

Verification:

During first year of commercial operation, the project owner will submit to the Energy Commission CPM copies of the Notice of Intent and the new modified Storm Water Pollution Prevention Plan accepted by the State Water Resources Control Board.

WAT-4: Use Flow Meters on Wells and Delivery Systems

The project owner shall ensure that flow meters are installed on project wells such that the total amount of water injected and produced on a monthly basis can be determined. In addition, the project owner shall ensure that separate flow meters are installed on that portion of the water delivery system that is dedicated to providing water to the project owner; and, on that portion of the water delivery system that will be used to provide water to MVPP.

Verification:

The project owner shall provide to the CEC CPM and CDFG on a quarterly basis a monthly accounting of the following:

- All groundwater injected into project wells;
- Water pumped from project wells that is supplied to the project owner; and,

- Water pumped from project wells that is supplied to MVPP. The CEC CPM shall provide notice that this material has been submitted to those identified on the project's compliance mailing list.

WAT-5: Limit Lower Aquifer Use to Historical Minimal Levels

MVPP shall limit water from the lower aquifer (Well #1 and Well #2) used for cooling water make-up for both existing and project units to 750 acre/feet per year total.

Verification:

- 60 days prior to commencement of construction, project owner shall submit plans detailing how quantities of water from the lower aquifer, used for cooling, will be measured.
- The project owner shall provide a status report on the use of annual make-up water from the lower aquifer to the CPM in its annual compliance report.

WAT-6: Maximize Use of Middle Aquifer and WWTP Water

MVPP shall maximize use of a mixture of secondary effluent water from the City of Redlands wastewater treatment plant and middle aquifer water, blending the two sources, as necessary to comply with Air Quality conditions limiting MVPP's use of middle aquifer water.

Verification:

The project owner shall provide a status report on the use of the mixture of effluent water from the wastewater treatment plant and middle aquifer water to the CPM in its annual compliance report. The report shall indicate volumetric amounts of water drawn from middle aquifer and volumetric amounts of water obtained from City of Redlands WWTP.

WAT-7: DHS Treatment Compliance

Prior to use of any water from the City of Redlands Wastewater Treatment Plant (WWTP), project owner shall ensure such water use complies with all requirements with the proposed Department of Health Services (DHS) regulations regarding treatment requirements for reclaimed water used in cooling towers.

Verification:

At least 60 days prior to taking any reclaim water from the City of Redlands WWTP. Project owner shall submit a report explaining how compliance of each requirement of the proposed DHS regulations is being met. The report shall indicate the resolution, if any, to issues of applicability and interpretation. The report will indicate where, if any and how, biocidal treatment will be applied to the water.

WAT-8: Direct Connection Permit

Prior to discharge to the SARI line, project owner shall obtain from San Bernardino Valley Municipal Water District, a Direct Connection Permit (DCP) for the SARI line.

Verification:

60 days prior to discharging any liquid to the SARI Line, the project owner shall provide a copy of the DCP to the CPM and to SBRWQCB.

WAT-9: SARI Line Discharge Capacity

Project owner shall obtain and maintain adequate discharge capacity in the SARI line at all times following and prior to first discharge to SARI line.

Verification:

At least 60 days prior to discharging any liquid to the SARI Line and thereafter as required in this condition, the project owner shall report:

- Original capacity and any changes in SARI line capacity owned by the project owner; and,
- Any suspected need for an increase in discharge requirements greater than existing SARI Line capacity owned and reasons for the change.

UNRESOLVED ISSUES IN SOIL AND WATER RESOURCES

MVPC is not aware of any soil and water issues requiring further exploration, analysis or mitigation. MVPC submits the above-stipulated conditions believing that the area of soil and water will be fully addressed.

GEOLOGY AND PALEONTOLOGY

This section presents a comprehensive analysis of Geology and Paleontology issues, both in previously permitted projects and in the case of the Mountainview Power Plant (MVPP)¹⁸. Previously permitted projects are analyzed for their standard, categorical and unique conditions as well as what triggered each categorical and unique condition. Next, MVPP is juxtaposed with past projects allowing necessary conditions to be identified. The juxtaposition begins by a thorough review of applicable laws, ordinances, regulations and standards (LORS). Then, the setting of the MVPP in the context of geology and paleontology is presented. Finally, Mountainview Power Company (MVPC) stipulates to conditions providing required mitigation and LORS compliance. The section closes by identifying any outstanding issues not resolved by the stipulated conditions.

OVERVIEW OF GEOLOGY AND PALEONTOLOGY ISSUE AREA

The Geology and Paleontology issue area involves determining potential impacts to significant geological and paleontological resources and ensuring LORS compliance. There are eight standard conditions. There are also three categorical conditions for Geology and Paleontology to be addressed in the Facility Closure Plan. Geology and Paleontology have had four unique conditions, all in High Desert.

PAST GEOLOGY AND PALEONTOLOGICAL CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-PAL-1	Designated Paleontologic Resources Specialist	Yes
STAN-PAL-2	Draft Paleontologic Resource Monitoring and Mitigation Plan	Yes
STAN-PAL-3	Paleontologic Resources Training Program	Yes
STAN-PAL-4	Paleontologic Resources Reporting Preparations	Yes
STAN-PAL-5	Measures to Ensure Adequate Paleontologic Resource Monitoring	Yes
STAN-PAL-6	Paleontologic Resource Recovery	Yes
STAN-PAL-7	Preliminary Paleontologic Resources Report	Yes

¹⁸ As in all the sections of this document, abbreviations are used for the last five permitted projects before the California Energy Commission. Those abbreviations are:

SPP = Sutter Power Plant
DEC = Delta Energy Center
LM = Los Medanos Energy Center
HD = High Desert
LP = La Paloma

STAN-PAL-8	Final Paleontologic Resources Report	Yes
CAT-PAL-1	Provide Paleontological Resources For Curation	No
CAT-PAL-2	Construction Period Paleontological Resources Management	No
CAT-PAL-3	Analysis of Recovered Fossil Materials in Facility Closure	Yes
UNI-PAL-1	Surveys and Staking	No
UNI-PAL-2	Final Alignment of all Linear Facilities	No
UNI-PAL-3	Reconnaissance Survey	No
UNI-PAL-4	BLM Paleontologic Resource Use Permit	No

STANDARD GEOLOGY AND PALEONTOLOGY CONDITIONS

STAN-PAL-1: Designated Paleontologic Resources Specialist

[LM-PAL-1]; [SPP-PAL-1]; [LP-PAL-1]; [DEC-PAL-1]; [HD-PAL-1]

Standard Description of Condition:

Prior to the start of construction, the project owner shall provide the California Energy Commission Compliance Project Manager (CPM) with the name(s) and qualifications of its designated paleontologic resources specialist and mitigation team members. The designated paleontologic resources specialist is responsible for implementing all the Conditions of Certification and for using qualified personnel to assist him or her in project-related field surveys. After CPM approval of the Paleontologic Resources Monitoring and Mitigation Plan, the designated paleontologic resources specialist and team shall be available to implement the mitigation plan prior to, and throughout construction of the project.

Protocol:

The project owner shall provide the CPM with the name and statement of qualifications for the designated paleontological resources specialist.

- 1) The statement of qualifications for the designated paleontological resource specialist shall demonstrate that the specialist meets the following minimum qualifications: a degree in paleontology, geology, or paleontological resource management; at least three years of paleontological resource mitigation and field experience in California, including at least one year 's experience leading paleontological resource mitigation and field activities.
- 2) The statement of qualifications shall include a list of specific projects the specialist has previously worked on; the role and responsibilities of the specialist for each project listed; and the names and phone numbers of contacts familiar with the specialist 's work on these referenced projects.
- 3) If the CPM determines that the qualifications of the proposed paleontological resources specialist are not in concert with the above requirements, the project

owner shall submit another individual's name and qualifications for consideration.

- 4) If the approved, designated paleontological resources specialist is replaced prior to completion of project mitigation, the project owner shall obtain CPM approval of the new designated paleontological resources specialist by submitting the name and qualifications of the proposed replacement to the CPM, at least ten (10) days prior to the termination or release of the preceding designated paleontological resources specialist. Should emergency replacement of the designated specialist become necessary, the project owner shall immediately notify the CPM to discuss the qualifications of its proposed replacement specialist.

Verification:

At least ninety (90) days prior to the start of construction on the project, the project owner shall submit the name and resume and the availability for its designated paleontological resources specialist to the CPM for review and approval. The CPM shall provide written approval or disapproval of the proposed paleontological resources specialist. At least ten (10) days prior to the termination or release of a designated paleontological resource specialist, the project owner shall obtain CPM approval of the replacement specialist by submitting to the CPM the name and resume of the proposed new designated paleontological resource specialist. Should emergency replacement of the designated specialist become necessary, the project owner shall immediately notify the CPM to discuss the qualifications of its proposed replacement specialist.

STAN-PAL-2: Draft Paleontologic Resource Monitoring and Mitigation Plan

[LM-PAL-2]; [SPP-PAL-3]; [LP-PAL-2]; [DEC-PAL-2]; [HD-PAL-5]

Standard Description of Condition:

Prior to the start of project construction, the designated paleontologic resources specialist shall prepare a draft paleontologic Resource Monitoring Mitigation Plan to identify general and specific measures to minimize potential impacts to sensitive paleontologic resources. The CPM will review and must approve in writing the draft paleontologic Resource Monitoring Mitigation Plan. After CPM approval, the project owner's designated paleontologic resource specialist and designated paleontologic resource team shall be available to implement that Monitoring and Mitigation Plan, as needed throughout project construction.

Protocol:

In addition to the project owner's adoption of the guidelines of the Society of Vertebrate paleontologists, as modified in the Application for Certification for the La Paloma Generating Project, dated July 1998 (Ex.1; revised November 1998), the project owner shall adopt and implement the BLM's *General Procedural Guidance Manual for Paleontological Resource Management* for those sections of the project determined by the BLM to be under its jurisdiction. When the guidelines overlap, the project owner shall follow the more stringent guideline. The Paleontological Resources Monitoring and Mitigation Plan shall include, but not be limited to, the following elements and measures:

- 1) A discussion of the sequence of project-related tasks, such as any pre-construction surveys, fieldwork, flagging, or staking; construction monitoring; mapping and data recovery; fossil preparation and recovery; identification and inventory; preparation of final reports; and transmittal of materials for curation.

- 2) Identification of the person(s) expected to assist with each of the tasks identified in (a) above, and a discussion of the mitigation team leadership and organizational structure, and the inter-relationship of tasks and responsibilities.
- 3) Where monitoring of project construction activities is deemed necessary, the extent of the areas where monitoring is to occur and a schedule for the monitoring.
- 4) An explanation that the designated Paleontological resources specialist shall have the authority to halt or redirect construction in the immediate vicinity of a vertebrate fossil find until the significance of the find can be determined.
- 5) A discussion of equipment and supplies necessary for recovery of fossil materials and any specialized equipment needed to prepare, remove, load, transport, and analyze large-sized fossils or extensive fossil deposits.
- 6) Inventory, preparation, and delivery for curation into a retrievable storage collection, in a public repository or museum which meets the Society of Vertebrate Paleontologists standards and requirements for the curation of Paleontological resources.
- 7) Identification of the institution that has agreed to receive any data and fossil materials recovered during project-related monitoring and mitigation work; discussion of any requirements or specifications for materials delivered for curation and how they will be met; and the name and phone number of the contact person at the institution.

Verification:

At least sixty (60) days prior to the start of construction on the project, the project owner shall provide the CPM with a copy of the Monitoring and Mitigation Plan prepared by the designated Paleontological resource specialist for review and approval. If the plan is not approved, the project owner, the designated paleontological resources specialist, and the CPM shall meet to discuss comments and negotiate necessary changes.

STAN-PAL-3: Paleontologic Resources Training Program

[LM-PAL-3]; [SPP-PAL-5]; [LP-PAL-3]; [DEC-PAL-3]; [HD-PAL-6]

Standard Description of Condition:

Prior to the start of construction on the project, the designated paleontologic resources specialist shall prepare an employee training program. The designated paleontologic resources specialist shall submit the training program to the CPM for approval.

Protocol:

The training program will discuss the potential to encounter fossil resources in the field, the sensitivity and importance of these resources, and the legal obligations to preserve and protect such resources.

The training shall also include the set of reporting procedures that workers are to follow if sensitive paleontologic resources are encountered during project activities. The training program will be presented by the designated paleontologic resources specialist and may be combined with other training programs prepared for cultural and biological resources, hazardous materials, or any other areas of interest or concern.

Verification:

At least thirty days prior to the start of construction on the project, the project owner shall submit to the CPM for review, comment, and written approval, the proposed employee

training program and set of reporting procedures the workers are to follow if Paleontologic resources are encountered during project construction.

The CPM shall provide the project owner with written approval or disapproval of the employee-training program and the set of procedures within 15 days of receipt of the submittal. If the draft-training program is not approved, the project owner, the designated Paleontologic resources specialist, and the CPM shall meet to discuss the comments and work out necessary changes.

STAN-PAL-4: Paleontologic Resources Reporting Preparations

[SPP-STAN-PAL-6]; [LP-STAN-PAL-4]; [DEC-STAN-PAL-4]; [HD-STAN-PAL-7]

Standard Description of Condition:

Prior to the start of Construction, and throughout the project construction period as needed for all new employees, the project owner and the designated paleontologic resource specialist shall provide the CPM-approved training to all the project managers, construction supervisors, and workers who operate ground disturbing equipment. The project owner and construction manager shall provide the workers with the CPM-approved set of procedures for reporting any sensitive paleontologic resources or fossil bearing sediments that may be discovered during project-related ground disturbance.

Protocol:

No protocol for this condition.

Verification:

Prior to the start of construction, and throughout the project construction period as needed for all new employees, the project owner and the designated paleontologic resources specialist shall present the CPM-approved training program on the potential for project impacts to sensitive paleontologic resources. The training shall include a set of reporting procedures for paleontologic resources encountered during project activities. The project owner shall provide documentation in the Monthly Compliance Report to the CPM that the employee training and the set of procedures have been provided to all project managers, construction supervisors, and to all workers.

STAN-PAL-5: Measures to Ensure Adequate Paleontologic Resource Monitoring

[LM-PAL-5]; [SPP-PAL-8]; [LP-PAL-5]; [DEC-PAL-4]; [HD-PAL-9]

Standard Description of Condition:

The designated paleontologic resource specialist shall be present at all times to monitor construction-related grading, excavation, trenching, and/or augering in areas.

Protocol:

No protocol for this condition.

Verification:

The project owner shall maintain in its compliance files copies of signed contracts or agreements with the designated paleontological resource specialist and other qualified research specialists who will ensure the necessary data and fossil recovery, mapping, preparation for analysis, identification, and inventory, and preparation for and delivery of all significant paleontological resource materials collected during data recovery and mitigation for the project. The project owner shall maintain these files for a period of three years after

completion and approval of the CPM-approved Paleontological Resources Report and shall keep these files available for periodic audit by the CPM.

STAN-PAL-6: Paleontologic Resource Recovery

[LM-PAL-6]; [SPP-PAL-9]; [LP-PAL-6]; [DEC-PAL-5]; [HD-PAL-10]

Standard Description of Condition:

The project owner through the designated paleontologic specialist, shall ensure the recovery, preparation for analysis, analysis, identification and inventory, the preparation for curation, and the delivery for curation of all significant paleontologic resource materials encountered and collected during the monitoring, data recovery, mapping and mitigation activities related to the project.

Protocol:

No protocol for this condition.

Verification:

The project owner shall maintain, in its compliance files, copies of signed contracts or agreements with the designated paleontologic resource specialist and other qualified research specialists. These specialists will ensure the necessary data and fossil recovery, mapping, preparation for analysis, analysis, identification and inventory, and preparation and delivery for curation of all significant paleontologic resource materials collected during data recovery and mitigation for the project. The project owner shall keep these files available for periodic audit by the CPM.

STAN-PAL-7: Preliminary Paleontologic Resources Report

[SPP-PAL-10]; [LP-PAL-7]; [DEC-PAL-6]; [HD-PAL-12]

Standard Description of Condition:

The project owner shall ensure preparation of a Preliminary Paleontologic Resources Report following completion of data recovery and site mitigation work. The preliminary report is to be prepared by the designated paleontologic resources specialist and submitted to the CPM for review, comment, and written approval.

Protocol:

No protocol for this condition.

Verification:

The preliminary report shall include (but not be limited to) preliminary information on the survey report(s), methodology, and recommendations; site records and maps; determinations of sensitivity and significance; data recovery and other mitigation activities; possible results and findings of any analysis to be conducted on recovered paleontologic resource materials and data; proposed research questions that may be answered or may have been raised by the data from the project; and an estimate of the time needed to complete the analysis of recovered fossil materials and prepare a final report. If no fossil resources were recovered during project construction, the CPM-approved preliminary report shall also serve as the final report and shall be filed with appropriate entities.

STAN-PAL-8: Final Paleontologic Resources Report

[LM-PAL-7]; [SPP-PAL-11]; [HD-PAL-15]

Standard Description of Condition:

The project owner shall ensure preparation of a Final Paleontologic Resources Report by the designated paleontologic resources specialist if significant fossil resources are found and recovered during project-related surveys, monitoring and mitigation.

Protocol:

No protocol for this condition.

Verification:

The project owner shall submit a copy of the draft Final Paleontologic Resources Report to the CPM for review, comment and written approval. The draft Final Paleontologic Resources Report shall be submitted to the CPM within ninety (90) days following completion of the analysis of the recovered fossil materials and preparation of text and related information, such as maps, diagrams, tables, charts, photos, etc.

CATEGORICAL GEOLOGY AND PALEONTOLOGY CONDITIONS

There have been three categorical conditions in the area of geology and paleontology.

CAT-PAL-1: Provide Paleontological Resources For Curation

[SPP-CAT-PAL-13]; [HD-CAT-PAL-15]

Categorical Description of Condition:

Within thirty days following filing of the Final Paleontologic Resources Report with the appropriate entities, the project owner shall deliver for curation all paleontologic resources materials collected during data recovery and mitigation for the project. The materials shall be delivered for curation into public repository, which meets Society of Vertebrate Paleontology (SVP) requirements for the curation of paleontologic resources.

Triggering Circumstance:

Potential for recovery of paleontological resources.

Protocol:

No protocol for this condition.

Verification:

The project owner, through the designated paleontologic resources specialist, shall maintain in its project history or compliance files copies of signed contracts or agreements with the museum(s), university (ies), or other appropriate public repository (ies), to which the project owner has provided for delivery and curation of all the paleontologic resource materials collected during data recovery and site mitigation for the project.

CAT-PAL-2: Construction Period Paleontological Resources Management

[SPP-CAT-PAL-7]; [HD-CAT-PAL-8]

Categorical Description of Condition:

Throughout the project construction period, the project owner shall provide the designated paleontologic resource specialist with a current schedule of anticipated weekly project activity and a map indicating the area(s) where construction activities will occur. The designated paleontologic resource specialist shall consult daily with the project

superintendent or construction field manger to confirm the area(s) to be worked on the next day(s).

Throughout the paleontologic resources pre-construction reconnaissance, monitoring and mitigation phases of the project, the designated paleontologic resources specialist shall keep a daily log of any fossil resource finds and the progress or status of the surveys, resource monitoring, mitigation, preparation, identification, and analytical work being conducted for the project. The designated paleontologic resource specialist may informally discuss the paleontologic resource monitoring and mitigation activities with the Commission technical counterpart.

Triggering Circumstance:

Potential for discovery of paleontological resources.

Protocol:

No protocol for this condition.

Verification:

The project owner shall include, in the Monthly Compliance Reports to the CPM, a summary of the daily logs prepared by the designated paleontologic resource specialist.

CAT-PAL-3: Analysis of Recovered Fossil Materials in Facility Closure

[LM-PAL-8]; [LP-PAL-8]; [DEC-PAL-7]

Standard Description of Condition:

The project owner shall include, in the facility closure plan, a description regarding the potential of the closure activities to impact paleontological resources. If no activities were proposed that would be potentially impact paleontological resources, than no mitigation measures for paleontological resource management are required. The conditions for closure will be determined when a facility closure plan is submitted to the CPM twelve months prior to closure of the facility.

Triggering Circumstance:

Projection previously disturbed region with less likelihood of paleontological resource discovery during construction.

Protocol:

The closure requirements for paleontological resources are to be based upon the Paleontological Resources Report and the proposed grading activities for closure.

Verification:

The project owner shall include a description of closure activities described above in the facility closure plan.

UNIQUE GEOLOGY AND PALEONTOLOGY CONDITIONS

There were four unique conditions in High Desert in the area of geology and paleontology.

UNI-PAL-1: Surveys and Staking

[HD-UNI-PAL-2]

Description of Condition:

Prior to the start of project construction, the project owner shall survey and stake all areas expected to be affected by construction and operation of the proposed project and its associated linear facilities. The surveys and staking shall reflect the final project design

and site layout and the final mile-posts, centerlines, and right-of-way boundaries for the linear facilities.

Triggering Situation:

Potential for discovery of paleontological resources.

Protocol:

No protocol for this condition.

Verification:

At least ninety days prior to the start of construction, the project owner shall stake and flag the boundaries of all areas expected to be affected by construction and operation of the proposed project and its associated linear facilities. The staking of linear routes shall define the mile-posts, centerlines, and right-of-way boundaries. The project owner shall notify the CPM when the surveys have been completed.

UNI-PAL-2: Final Alignment of all Linear Facilities

[HD-UNI-PAL-3]

Description of Condition:

Prior to the start of project construction, the project owner shall provide the designated paleontologic resource specialist and the CPM with maps and drawings showing the final project design and site layout of the final alignment of all linear facilities, as surveyed. The routes for the linear facilities shall be provided on 7.5 minute quad maps, showing mile post markers, final center lines and right-of-way boundaries, may be associated with project-related access roads, storage yards, laydown sites, pull sites, pump or pressure stations, switchyards, electrical tower or pole footings, etc.

After reconnaissance surveys by the designated paleontologic resource specialist, the specialist may request, and the project owner shall provide, enlargements of portions of the 7.5 minute maps presented as a sequence of strip maps for the linear facility routes. The strip maps shall show mile-post markers and the detailed locations of proposed access roads, storage or laydown sites, tower or pole footings, and any other areas of disturbance associated with the construction and maintenance of linear facilities.

Triggering Situation:

Potential for discovery of paleontological resources.

Protocol:

No protocol for this condition.

Verification:

At least ninety (90) days prior to the start of construction on the project, the project owner shall provide the designated paleontologic resource specialist and the CPM with final drawings and site layouts for all project facilities and maps at appropriate scale(s) for all areas potentially affected by project construction.

UNI-PAL-3: Reconnaissance Survey

[HD-UNI-PAL-4]

Description of Condition:

Prior to the start of construction, the designated paleontologic resource specialist shall conduct a reconnaissance survey of the final project site and the final center lines and

right-of-way for the project's linear facilities. Potentially sensitive areas identified during this reconnaissance shall be included in the Monitoring and Mitigation Plan.

Triggering Situation:

Potential for discovery of paleontological resources.

Protocol:

No protocol for this condition.

Verification:

At least seventy-five days prior to the start of construction the designated paleontologic resources specialist shall conduct a reconnaissance survey of the final project site and the final routes for the project-related linear facilities. The dates, survey methods, findings, and recommendations shall be summarized in the Monitoring and Mitigation Plan.

UNI-PAL-4: BLM Paleontologic Resource Use Permit

[HD-UNI-PAL-11]

Description of Condition:

The Project owner shall ensure that the designated paleontologic resource specialist obtains and maintains a current BLM Paleontologic Resource Use Permit to gain access to lands managed by the US BLM and to conduct any surveys, monitoring, data and/or fossil recovery activities on these lands. The use permit shall be obtained from the state office of the BLM in Sacramento, California, no less than ten days prior to the start of paleontologic resource activities governed by the permit.

Triggering Situation:

Potential for discovery of paleontological resources.

Protocol:

No protocol for this condition.

Verification:

The project owner shall provide the CPM with a copy of the BLM paleontologic resource use permit received by the designated paleontologic resource specialist in the next monthly compliance report following its receipt or renewal.

GEOLOGY AND PALEONTOLOGY ANALYSIS FOR MVPP

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Federal

No federal LORS were identified that would be applicable to the proposed project.

State

The California Building Code (1995) specifies the acceptable design criteria for structures and open excavations with respect to seismic design and load-bearing capacity.

Paleontologic resources are a limited, nonrenewable, very sensitive scientific and educational resource and, in California, are afforded protection under the following state environmental legislation (California Office of Historic Preservation 1983).

- CEQA (Public Resources Code section 21000 *et seq.*): requires public agencies and private interests to identify the environmental consequences of their proposed projects on any object or site significant to the scientific annals of California.
- Public Resources Code, Section 5097.5 (Stats. 1965, c. 1136, p. 2792): defines any unauthorized disturbance or removal of fossil site or remains on public land as a misdemeanor.
- Warren-Alquist Act (Public Resources Code 25000 *et seq.*): requires CEC to evaluate energy facility siting in unique areas of scientific concern (section 25527).

In response to CEQA and subsequent acts, many agencies in California, including the CEC (1997), also have developed environmental guidelines for protecting paleontologic resources in areas under their respective jurisdictions. Under its guidelines, the CEC can require a paleontologic resource inventory/impact assessment of an area to be adversely impacted by a discretionary project deemed nonexempt under its guidelines. As part of such an assessment, the CEC can require an inventory and the mapping of fossil-bearing rock units and previously recorded and newly documented fossil sites by a qualified paleontologist in the area to be affected, an evaluation of the scientific importance of these resources, a determination of the adverse environmental impacts that might arise from the project and an appraisal of their significance, and formulation of measures to mitigate these impacts to an insignificant level. The CEC has required that such an assessment be conducted in support of the MVPC AFC because of the potential for earth moving associated with project construction resulting in the loss of fossil sites and remains at the project site. This AFC, particularly with regard to the mitigation measures presented in Section 6.16.4 of the AFC, is in compliance with CEC (1997) paleontologic resource guidelines. The CEC guidelines, in turn, follow Society of Vertebrate Paleontology (1995 and 1996) standard measures for assessing the scientific importance of paleontologic resources in an area of potential environmental effect, mitigating significant adverse construction-related environmental impacts on these resources, and with conditions for acceptance of an impact mitigation program fossil collection by a museum repository.

Local

No local LORS related to geologic hazards and resources were identified. No county or city LORS would apply to the paleontologic resources in the project area.

SETTING

The proposed facility will be located on an existing facility currently being annexed by the City of Redlands in San Bernardino County. The project site consists of a total of 64 acres located adjacent to the Santa Ana River. The existing facility consists of two steam boiler generating units that feed into an immediately adjacent Southern California Edison (SCE) transmission facility and substation. The two existing units utilize groundwater in cooling towers for cooling purposes and provide a nominal gross output of 66 MW each.

The proposed new facility will utilize 18.7 already hardpacked or paved acres of the site, mostly to the North of the existing facility.

The area can be best described as an industrial region with other industrial areas and a mixture of residential and commercial zones nearby. To the North of site lies the Santa Ana River, dry most of the year, which has numerous other industrial and commercial facilities along its side. Directly across the Santa Ana River is the former Norton Air Force Base, now the San Bernardino International Airport. It primarily serves as a commercial airport with large cargo planes flying in and out on a regular basis. The Santa Ana River itself has been highly disturbed, with reinforced or concrete channel banks, numerous surface mining operations going on to the North within the river bed.

To the East of the Site lie agricultural land and a water treatment facility. To the South lies agricultural land followed by the Highway -10 freeway. To the west lies commercial, light industrial and residential areas. The residential area is an small enclave to the Southwest of the facility.

IMPACTS

There are no expected impacts in the geology and paleontology area. Hazardous mitigation is recommended below.

MITIGATION

The following subsection describes mitigation measures that might be used to reduce geologic hazards.

Surface faulting Rupture

No active or potentially active faults were found to cross the MVPC site. However, one fault crosses the planned natural gas pipeline alignment. No mitigation measures are required to reduce the hazard from surface faulting rupture at the MVPC family. However, along the natural gas pipeline special attention to withstand potential ground rupture will be required.

Ground Shaking

The MVPC power plant and pipelines will need to be designed and constructed to withstand strong earthquake shaking as specified in the 1997 Uniform Building Code for Seismic Zone 4.

Cumulative Impacts

Neither the power plant site nor areas potentially disturbed by pipeline installation are known to have significant geological resources. In addition, the potential for the project site and pipeline alignments to be affected by geologic hazards such as flooding, liquefaction, subsidence, and slope instability are expected to be low. The primary geologic hazard at the project site and along the pipeline alignments is earthquake ground shaking. However, the power plant will be designed and constructed to withstand strong ground motions. Based on the fact that the geologic hazards such as earthquake ground shaking will be mitigated, to the extent possible, during design and construction,

cumulative increased impacts to geologic resources and hazards are expected due to the proposed project.

FACILITY CLOSURE

Typically, facility closure may include the removal of the structures and subsurface utilities. The decommissioning of the MVPC facility would result in similar geologic hazards being generated as during construction activities. When the MVPC facility is decommissioned, the pipeline alignments may be left in place for use by other entities, or be abandoned in place. The geologic hazards associated with their continued operation or abandonment are discussed above. No special mitigation requirements are expected to be needed above. No special mitigation requirements are expected to be needed for the decommissioning of the MVPC facility and its appurtenant pipeline alignments.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions:

The standard conditions of certification should be adopted to ensure full LORS compliance and hazard mitigation.

Recommendations:

MVPC recommends that the stipulated conditions be adopted.

MVPC's CONDITIONS ANALYSIS

Below, MVPP analyzes the applicability to MVPP of all past conditions.

DISPOSITION OF STANDARD CONDITIONS

STAN-PAL-1: Applicable

Prior to the start of construction, the project owner shall provide the California Energy Commission Compliance Project Manager (CPM) with the name(s) and qualifications of its designated paleontologic resources specialist and mitigation team members. The designated paleontologic resources specialist is responsible for implementing all the Conditions of Certification and for using qualified personnel to assist him or her in project-related field surveys. After CPM approval of the Paleontologic Resources Monitoring and Mitigation Plan, the designated paleontologic resources specialist and team shall be available to implement the mitigation plan prior to, and throughout construction of the project.

STAN-PAL-2: Applicable

Prior to the start of project construction, the designated paleontologic resources specialist shall prepare a draft paleontologic Resource Monitoring Mitigation Plan to identify general and specific measures to minimize potential impacts to sensitive paleontologic resources. The CPM will review and must approve in writing the draft paleontologic Resource Monitoring Mitigation Plan. After CPM approval, the project owner's designated paleontologic resource specialist and designated paleontologic resource team

shall be available to implement that Monitoring and Mitigation Plan, as needed throughout project construction.

STAN-PAL-3: Applicable

Prior to the start of construction on the project, the designated paleontologic resources specialist shall prepare an employee training program. The designated paleontologic resources specialist shall submit the training program to the CPM for approval.

STAN-PAL-4: Applicable

Prior to the start of Construction, and throughout the project construction period as needed for all new employees, the project owner and the designated paleontologic resource specialist shall provide the CPM-approved training to all the project managers, construction supervisors, and workers who operate ground disturbing equipment. The project owner and construction manager shall provide the workers with the CPM-approved set of procedures for reporting any sensitive paleontologic resources or fossil bearing sediments that may be discovered during project-related ground disturbance.

STAN-PAL-5: Applicable

The designated paleontologic resource specialist shall be present at all times to monitor construction-related grading, excavation, trenching, and/or augering in areas.

STAN-PAL-6: Applicable

The project owner through the designated paleontologic specialist, shall ensure the recovery, preparation for analysis, analysis, identification and inventory, the preparation for curation, and the delivery for curation of all significant paleontologic resource materials encountered and collected during the monitoring, data recovery, mapping and mitigation activities related to the project.

STAN-PAL-7: Applicable

The project owner shall ensure preparation of a Preliminary Paleontologic Resources Report following completion of data recovery and site mitigation work. The preliminary report is to be prepared by the designated paleontologic resources specialist and submitted to the CPM for review, comment, and written approval.

STAN-PAL-8: Applicable

The project owner shall ensure preparation of a Final Paleontologic Resources Report by the designated paleontologic resources specialist if significant fossil resources are found and recovered during project-related surveys, monitoring and mitigation.

DISPOSITION OF CATEGORICAL CONDITIONS

CAT-PAL-1: Not needed

Within thirty days following filing of the Final Paleontologic Resources Report with the appropriate entities, the project owner shall deliver for curation all paleontologic resources materials collected during data recovery and mitigation for the project. The materials shall be delivered for curation into public repository, which meets Society of Vertebrate Paleontology (SVP) requirements for the curation of paleontologic resources.

CAT-PAL-2: Not needed

Throughout the project construction period, the project owner shall provide the designated paleontologic resource specialist with a current schedule of anticipated weekly project activity and a map indicating the area(s) where construction activities will occur. The designated paleontologic resource specialist shall consult daily with the project superintendent or construction field manager to confirm the area(s) to be worked on the next day(s).

Throughout the paleontologic resources pre-construction reconnaissance, monitoring and mitigation phases of the project, the designated paleontologic resources specialist shall keep a daily log of any fossil resource finds and the progress or status of the surveys, resource monitoring, mitigation, preparation, identification, and analytical work being conducted for the project. The designated paleontologic resource specialist may informally discuss the paleontologic resource monitoring and mitigation activities with the Commission technical counterpart.

CAT-PAL-3: Applicable

The project owner shall include, in the facility closure plan, a description regarding the potential of the closure activities to impact paleontological resources. If no activities were proposed that would be potentially impact paleontological resources, then no mitigation measures for paleontological resource management are required. The conditions for closure will be determined when a facility closure plan is submitted to the CPM twelve months prior to closure of the facility.

DISPOSITION OF UNIQUE CONDITIONS

UNI-PAL-1: Not needed

Addresses that project owner shall survey and stake all areas expected to be affected by construction and operation of proposed project. MVPP agrees that this condition is viable but not needed for the MVPP.

UNI-PAL-2: Not needed

Addresses the need that prior to construction, project owner shall provide the designated paleontologic resource specialist and the CPM with maps and drawings showing the final project design and site layout of the final alignment of all linear facilities, as surveyed. This condition is not needed for the MVPP.

UNI-PAL-3: Not needed

Addresses the need to provide prior to the construction on the project, a reconnaissance survey of the final project site and the final centerlines and right-of-way for the project's linear facilities. This condition is not needed for the MVPP.

UNI-PAL-4: Not needed

Requires the project owner to provide the CPM with a copy of the BLM paleontologic resource use permit received by the designated paleontologic resource specialist in the

monthly compliance report following its receipt or renewal. This condition is not needed for the MVPP.

MVPC'S STIPULATED CONDITIONS OF CERTIFICATION

PAL-1: Designated Paleontologic Resources Specialist

Prior to the start of construction, the project owner shall provide the California Energy Commission Compliance Project Manager (CPM) with the name(s) and qualifications of its designated paleontologic resources specialist and mitigation team members.

The designated paleontologic resources specialist is responsible for implementing all the Conditions of Certification and for using qualified personnel to assist him or her in project-related field surveys.

After CPM approval of the Paleontologic Resources Monitoring and Mitigation Plan, the designated paleontologic resources specialist and team shall be available to implement the mitigation plan prior to, and throughout construction of the project.

Protocol:

The project owner shall provide the CPM with the name and statement of qualifications for the designated paleontological resources specialist.

- 1) The statement of qualifications for the designated paleontological resource specialist shall demonstrate that the specialist meets the following minimum qualifications: a degree in paleontology, geology, or paleontological resource management; at least three years of paleontological resource mitigation and field experience in California, including at least one year's experience leading paleontological resource mitigation and field activities.
- 2) The statement of qualifications shall include a list of specific projects the specialist has previously worked on; the role and responsibilities of the specialist for each project listed; and the names and phone numbers of contacts familiar with the specialist's work on these referenced projects.
- 3) If the CPM determines that the qualifications of the proposed paleontological resources specialist are not in concert with the above requirements, the project owner shall submit another individual's name and qualifications for consideration.
- 4) If the approved, designated paleontological resources specialist is replaced prior to completion of project mitigation, the project owner shall obtain CPM approval of the new designated paleontological resources specialist by submitting the name and qualifications of the proposed replacement to the CPM, at least ten (10) days prior to the termination or release of the preceding designated paleontological resources specialist. Should emergency replacement of the designated specialist become necessary, the project owner shall immediately notify the CPM to discuss the qualifications of its proposed replacement specialist.

Verification:

At least ninety (90) days prior to the start of construction on the project, the project owner shall submit the name and resume and the availability for its designated paleontological resources specialist to the CPM for review and approval. The CPM shall provide written approval or disapproval of the proposed paleontological resources specialist. At least ten (10) days prior to the termination or release of a designated paleontological resource specialist, the project owner shall obtain CPM approval of the replacement specialist by submitting to the CPM the name and resume of the proposed new designated paleontological resource specialist. Should emergency replacement of the designated specialist become necessary, the project owner shall immediately notify the CPM to discuss the qualifications of its proposed replacement specialist.

PAL-2: Draft Paleontologic Resource Monitoring and Mitigation Plan

Prior to the start of project construction, the designated paleontologic resources specialist shall prepare a draft paleontologic Resource Monitoring Mitigation Plan to identify general and specific measures to minimize potential impacts to sensitive paleontologic resources. The CPM will review and must approve in writing the draft paleontologic Resource Monitoring Mitigation Plan. After CPM approval, the project owner's designated paleontologic resource specialist and designated paleontologic resource team shall be available to implement that Monitoring and Mitigation Plan, as needed throughout project construction.

Protocol:

In addition to the project owner's adoption of the guidelines of the Society of Vertebrate paleontologists, as modified in the Application for Certification for the La Paloma Generating Project, dated July 1998 (Ex.1; revised November 1998), the project owner shall adopt and implement the BLM's *General Procedural Guidance Manual for Paleontological Resource Management* for those sections of the project determined by the BLM to be under its jurisdiction. When the guidelines overlap, the project owner shall follow the more stringent guideline. The Paleontological Resources Monitoring and Mitigation Plan shall include, but not be limited to, the following elements and measures:

- 1) A discussion of the sequence of project-related tasks, such as any pre-construction surveys, fieldwork, flagging, or staking; construction monitoring; mapping and data recovery; fossil preparation and recovery; identification and inventory; preparation of final reports; and transmittal of materials for curation.
- 2) Identification of the person(s) expected to assist with each of the tasks identified in (a) above, and a discussion of the mitigation team leadership and organizational structure, and the inter-relationship of tasks and responsibilities.
- 3) Where monitoring of project construction activities is deemed necessary, the extent of the areas where monitoring is to occur and a schedule for the monitoring.
- 4) An explanation that the designated Paleontological resources specialist shall have the authority to halt or redirect construction in the immediate vicinity of a vertebrate fossil find until the significance of the find can be determined.
- 5) A discussion of equipment and supplies necessary for recovery of fossil materials and any specialized equipment needed to prepare, remove, load, transport, and analyze large-sized fossils or extensive fossil deposits.

- 6) Inventory, preparation, and delivery for curation into a retrievable storage collection, in a public repository or museum that meets the Society of Vertebrate

Paleontologists standards and requirements for the curation of paleontological resources.

- 7) Identification of the institution that has agreed to receive any data and fossil materials recovered during project-related monitoring and mitigation work; discussion of any requirements or specifications for materials delivered for curation and how they will be met; and the name and phone number of the contact person at the institution.

Verification:

At least sixty (60) days prior to the start of construction on the project, the project owner shall provide the CPM with a copy of the Monitoring and Mitigation Plan prepared by the designated Paleontological resource specialist for review and approval. If the plan is not approved, the project owner, the designated paleontological resources specialist, and the CPM shall meet to discuss comments and negotiate necessary changes.

PAL-3: Paleontologic Resources Training Program

Prior to the start of construction on the project, the designated paleontologic resources specialist shall prepare an employee training program. The designated paleontologic resources specialist shall submit the training program to the CPM for approval.

Protocol:

The training program will discuss the potential to encounter fossil resources in the field, the sensitivity and importance of these resources, and the legal obligations to preserve and protect such resources.

The training shall also include the set of reporting procedures that workers are to follow if sensitive paleontologic resources are encountered during project activities. The training program will be presented by the designated paleontologic resources specialist and may be combined with other training programs prepared for cultural and biological resources, hazardous materials, or any other areas of interest or concern.

Verification:

At least thirty days prior to the start of construction on the project, the project owner shall submit to the CPM for review, comment, and written approval, the proposed employee training program and set of reporting procedures the workers are to follow if Paleontologic resources are encountered during project construction.

The CPM shall provide the project owner with written approval or disapproval of the employee training program and the set of procedures within 15 days of receipt of the submittal. If the draft training program is not approved, the project owner, the designated Paleontologic resources specialist, and the CPM shall meet to discuss the comments and work out necessary changes.

PAL-4: Paleontologic Resources Reporting Preparations

Prior to the start of Construction, and throughout the project construction period as needed for all new employees, the project owner and the designated paleontologic

resource specialist shall provide the CPM-approved training to all the project managers, construction supervisors, and workers who operate ground disturbing equipment. The project owner and construction manager shall provide the workers with the CPM-approved set of procedures for reporting any sensitive paleontologic resources or fossil bearing sediments that may be discovered during project-related ground disturbance.

Verification:

Prior to the start of construction, and throughout the project construction period as needed for all new employees, the project owner and the designated paleontologic resources specialist shall present the CPM-approved training program on the potential for project impacts to sensitive paleontologic resources. The training shall include a set of reporting procedures for paleontologic resources encountered during project activities. The project owner shall provide documentation in the Monthly Compliance Report to the CPM that the employee training and the set of procedures have been provided to all project managers, construction supervisors, and to all workers.

PAL-5: Measures to Ensure Adequate Paleontologic Resource Monitoring

The designated paleontologic resource specialist shall be present at all times to monitor construction-related grading, excavation, trenching, and/or augering in areas.

Verification:

The project owner shall maintain in its compliance files copies of signed contracts or agreements with the designated paleontological resource specialist and other qualified research specialists who will ensure the necessary data and fossil recovery, mapping, preparation for analysis, identification, and inventory, and preparation for and delivery of all significant paleontological resource materials collected during data recovery and mitigation for the project. The project owner shall maintain these files for a period of three years after completion and approval of the CPM-approved Paleontological Resources Report and shall keep these files available for periodic audit by the CPM.

PAL-6: Paleontologic Resource Recovery

The project owner through the designated paleontologic specialist, shall ensure the recovery, preparation for analysis, analysis, identification and inventory, the preparation for curation, and the delivery for curation of all significant paleontologic resource materials encountered and collected during the monitoring, data recovery, mapping and mitigation activities related to the project.

Verification:

The project owner shall maintain, in its compliance files, copies of signed contracts or agreements with the designated paleontologic resource specialist and other qualified research specialists. These specialists will ensure the necessary data and fossil recovery, mapping, preparation for analysis, analysis, identification and inventory, and preparation and delivery for curation of all significant paleontologic resource materials collected during data recovery and mitigation for the project. The project owner shall keep these files available for periodic audit by the CPM.

PAL-7: Preliminary Paleontologic Resources Report

The project owner shall ensure preparation of a Preliminary Paleontologic Resources Report following completion of data recovery and site mitigation work. The preliminary report is to be prepared by the designated paleontologic resources specialist and submitted to the CPM for review, comment, and written approval.

Verification:

The preliminary report shall include (but not be limited to) preliminary information on the survey report(s), methodology, and recommendations; site records and maps; determinations of sensitivity and significance; data recovery and other mitigation activities; possible results and findings of any analysis to be conducted on recovered paleontologic resource materials and data; proposed research questions that may be answered or may have been raised by the data from the project; and an estimate of the time needed to complete the analysis of recovered fossil materials and prepare a final report. If no fossil resources were recovered during project construction, the CPM-approved preliminary report shall also serve as the final report and shall be filed with appropriate entities.

PAL-8: Final Paleontologic Resources Report

The project owner shall ensure preparation of a Final Paleontologic Resources Report by the designated paleontologic resources specialist if significant fossil resources are found and recovered during project-related surveys, monitoring and mitigation.

Verification:

The project owner shall submit a copy of the draft Final Paleontologic Resources Report to the CPM for review, comment and written approval. The draft Final Paleontologic Resources Report shall be submitted to the CPM within ninety (90) days following completion of the analysis of the recovered fossil materials and preparation of text and related information, such as maps, diagrams, tables, charts, photos, etc.

UNRESOLVED ISSUES IN GEOLOGY AND PALEONTOLOGY

MVPC is not aware of any geology and paleontology issues requiring further exploration, analysis or mitigation. MVPC submits the above-stipulated conditions believing that the area of geology and paleontology will be thus fully addressed.

FACILITY DESIGN

This section presents a comprehensive analysis of Facility Design issues, both in previously permitted projects and in the case of the Mountainview Power Plant (MVPP)¹⁹. Previously permitted projects, all combined cycle, natural gas plants, are analyzed for their standard, categorical and unique conditions as well as what triggered each categorical and unique condition. Then, MVPP is juxtaposed with past projects allowing necessary conditions to be identified. A complete review of applicable laws, ordinances, regulations and standards (LORS) and the setting of the MVPP are presented. This foundation of past and present impacts and LORS allows Mountainview Power Company (MVPC) to stipulate to all necessary conditions that provide required mitigation and ensure LORS compliance. The section closes by identifying any outstanding issues not resolved by the stipulated conditions.

OVERVIEW OF FACILITY DESIGN ISSUE AREA

Facility Design involves an analysis of and presentation of LORS applicable to facility design; evaluation of proposed design criteria; LORS compliance; identification of the Energy Commission's design review and construction inspection process, which is used to ensure compliance with applicable LORS and protection of the environment and public health and safety; and conditions of certification proposed by staff to ensure that the project will be designed and constructed to comply with all applicable LORS, and protect environmental quality and assure public health and safety.

Facility design has been very consistent and all five previously permitted projects have all had the exact same twenty-five (25) conditions. These conditions are broken down into five topical areas: General (9 standard conditions), Geologic (2 standard conditions), Civil (4 standard conditions), Structural (4 conditions), Mechanical (4 conditions), and Electrical (2 conditions).

PAST FACILITY DESIGN CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STANDARD GENERAL CONDITIONS		
STAN-FAC-1	California Building Code	Yes
STAN-FAC-2	Facility Design Submittal	Yes

¹⁹ As in all the sections of this document, abbreviations are used for the last five permitted projects before the California Energy Commission. Those abbreviations are:

SPP = Sutter Power Plant
DEC = Delta Energy Center
LM = Los Medanos Energy Center
HD = High Desert
LP = La Paloma

STAN-FAC-3	Building Permit Fees	Yes
STAN-FAC-4	Assign Resident Engineer	Yes
STAN-FAC-5	Registered Engineer	Yes
STAN-FAC-6	Certified Special Inspector	Yes
STAN-FAC-7	Status of Construction	Yes
STAN-FAC-8	Final Approval of all Completed Work	Yes
STAN-FAC-9	Closure/Decommissioning Plan	Yes
STANDARD GEOLOGIC CONDITIONS		
STAN-GEO-FAC-1	Assigning Geologist	Yes
STAN-GEO-FAC-2	Duties of Geologist	Yes
STANDARD CIVIL CONDITIONS		
STAN-CIV-FAC-1	Review and Approval	Yes
STAN-CIV-FAC-2	Unforeseen Adverse Soil	Yes
STAN-CIV-FAC-3	Inspections	Yes
STAN-CIV-FAC-4	Erosion and Sedimentation	Yes
STANDARD STRUCTURAL CONDITIONS		
STAN-STRUC-FAC-1	Design Plans and Drawings	Yes
STAN-STRUC-FAC-2	CBO Requirements	Yes
STAN-STRUC-FAC-3	Design Changes	Yes
STAN-STRUC-FAC-4	Hazardous Materials	Yes
STANDARD MECHANICAL CONDITIONS		
STAN-MECH-FAC-1	Final Design Drawings	Yes
STAN-MECH-FAC-2	Cal –OSHA Requirements	Yes
STAN-MECH-FAC-3	HVAC Requirements	Yes
STAN-MECH-FAC-4	Plumbing System Conditions	Yes
STANDARD ELECTRICAL CONDITIONS		
STAN-ELEC-FAC-1	Electrical Systems Plans	Yes
STAN-ELEC-FAC-2	Final Plant Designs	Yes

STANDARD FACILITY DESIGN CONDITIONS

STAN-FAC-1: California Building Code

[LM-FAC-1]; [SPP-FAC-1]; [DEC-FAC-1]; [LPFAC-1]; [HD-FAC-1]

Standard description of condition:

Project Owner shall design, construct and inspect the project in accordance with the California Building Code (CBC) and all other applicable LORS.

Protocol:

Condition has no protocol.

Verification:

Within 30 days after receipt of the Certificate of Occupancy, the project owner shall submit to the CPM a statement of verification, signed by the responsible engineer, attesting that all design, construction, installation and inspection requirements of the applicable LORS and the Commission's Decision have been met for facility design. The project owner shall provide the CPM a copy of the Certificate of Occupancy in the next Month Compliance Report after receipt of the permit from the CBO [Section 109 – Certificate of Occupancy.]

STAN-FAC-2: Facility Design Submittals

[LM-FAC-2]; [SPP-FAC-2]; [DEC-FAC-2]; [LP-FAC-2]; [HD-FAC-2]

Standard description of condition:

Project Owner shall furnish to the California Energy Commission (CEC), California Project Manager (CPM) and to the Chief Building Official (CBO), a schedule of facility design submittals, Master Drawing List and Specification List.

Protocol:

Condition has no protocol.

Verification:

At least 60 days prior to the start of rough grading, the project owner shall submit the schedule, a Master Drawing List, a Master Specifications List to the CBO and to the CPM. The project owner shall provide schedule updates in the Monthly Compliance Report.

STAN-FAC-3: Building Permit Fees

[LM-FAC-3]; [SPP-FAC-3]; [DEC-FAC-3]; [LP-FAC-3]; [HD-FAC-3]

Standard description of condition:

Project Owner shall make payments to the CBO equivalent to the fees listed in Chapter 1. Section 107 and Table 1-A – Building Permit Fees. Appendix Chapter 33. Section 3310 and Table A-33-A- Grading Plan Review Fees, and Table A-33-B- Grading Permit Fees. Project Owner shall pay the adjusted fees.

Protocol:

Condition has no protocol.

Verification:

The project owner shall make the required payments to the CBO at the time submittal of the plans, design calculations, specifications, or soil reports. The project owner shall send a copy of the CBO's receipt of payment to the CPM in the next Monthly Compliance Report indicating that the applicable fee has been paid.

STAN-FAC-4: Assign Resident Engineer

[LM-FAC-4]; [SPP-FAC-4]; [DEC-FAC-4]; [LP-FAC-4]; [HD-FAC-4]

Standard description of condition:

Prior to the start of site preparation, the project owner shall assign a California registered architect, structural engineer/civil engineer, as a resident engineer, to be in Standard responsible charge of the project.

Protocol:

The RE shall:

1. Monitor construction progress to ensure compliance with the design intent;
2. Ensure that construction of all the facilities conforms, in every material respect, to the applicable LORS, approved plans, and specifications;
3. Prepare documents to initiate changes in the approved drawings and specifications when directed by the project owner or as required by conditions on the project;
4. Be responsible for providing the project inspectors and testing agency (ies) with complete an up-to-date set(s) of stamped drawings, plans, specifications and other required documents;

5. Be responsible for the timely submittal of construction progress reports to the CBO from the project inspectors, the contractor, and other engineers who have been delegated responsibility for portions of the project; and
6. Be responsible for notifying the CBO of corrective action or the disposition of items noted on laboratory reports or other tests as not conforming to the approved plans and specifications.

Verification:

At least 30 days prior to the start of rough grading, the project owner shall submit to the CBO for review and approval, the name, qualifications and registration number of the RE and any other delegated engineers assigned to the project. The project owner shall notify the CPM of the CBO's approvals of the RE and other delegated engineer(s) within five days of the approval.

If the RE or the delegated engineer(s) are subsequently reassigned or replaced, the project owner has five days in which to submit the name, qualifications, and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within five days of the approval.

STAN-FAC-5: Registered Engineer

[LM-FAC-5]; [SPP-FAC-5]; [DEC-FAC-5]; [LP-FAC-5]; [HD-FAC-5]

Standard description of condition:

Project Owner shall assign at least one of each of the following California registered engineers to the project: A) a civil engineer; B) a geotechnical or civil engineer experienced and knowledgeable in the practice of soils engineering; C) a design engineer who is either a structural engineer or civil engineer who is fully competent and proficient in the design of power plant structures and equipment supports; D) a mechanical engineer; and E) an electrical engineer.

Protocol:

Civil Engineer shall:

1. Design, stamp, and sign all plans, calculations, and specifications for proposed site work, civil works, and related facilities to comply with the Energy Commission Decision.
2. Provide consultation to the RE during the construction phase of the project, and recommend changes in the design of the civil works facilities and changes in the construction procedures.

Geotechnical Engineer shall:

1. Review all the engineering geology reports, and prepare a final soils grading report;
2. Prepare the soils engineering reports required by Appendix Chapter 33, Section 3309.5;
3. Be present, as required, during site grading and earthwork to provide consultation and monitor compliance with the requirements set forth in Appendix Chapter 33, Section 3317;
4. Recommend field changes to the civil engineer and RE;

5. Review the geotechnical report, field exploration report, laboratory tests, and engineering analysis detailing the nature and extent of the site soils that may be susceptible to liquefaction, rapid settlement or collapse when saturated under load; and
6. Prepare reports on foundation investigation to comply with Chapter 18, Section 1804.

Design Engineer shall:

1. Be directly responsible for the design of the proposed structures and equipment supports;
2. Provide consultation to the RE during design and construction of the project;
3. Monitor construction progress to ensure compliance with the design intent;
4. Evaluate and recommend necessary changes in design; and
5. Prepare and sign all major building plans, specifications and calculations.

The mechanical engineer shall be responsible for, and sign and stamp a statement with, each mechanical submittal to the CBO stating that the proposed final design plans, specifications, and calculations conform will all of the mechanical engineering design requirements set forth in the Energy Commission Decision.

Electrical Engineer shall:

1. Be responsible for the electrical design of the project; and
2. Sign and stamp all electrical design drawings, plans, specifications, and calculations

Verification:

At least 30 days prior to the start of rough grading, the project owner shall submit to the CBO for review and approval, the names, qualifications and registration numbers of all the responsible engineers assigned to the project. The project owner shall notify the CPM of the CBO's approvals if the engineers within five days of the approval.

STAN-FAC-6: Certified Special Inspector

[LM-FAC-6]; [SPP-FAC-6]; [DEC-FAC-6]; [LP-FAC-6]; [HD-FAC-6]

Standard description of condition:

Project Owner shall assign to the project qualified and certified special inspector (s) who shall be responsible for the special inspections required by Chapter 17. Section 1701 – Special Inspections and Section 1701.5 – Type of Work (requiring special inspection), Section 106.3.5 – Inspection and observation program.

Protocol:

Special Inspector shall:

1. Be a qualified person who shall demonstrate competence, to the satisfaction of the CBO, for inspection of the particular type of construction requiring special or continuous inspection;
2. Observe the work assigned for conformance with the approved design drawings and specifications;
3. Furnish inspection reports to the CBO and RE. All discrepancies shall be brought to the immediate attention of the RE for correction, then if uncorrected, to the CBO and the CPM; and
4. Submit a final signed report to the RE, CBO and CPM, stating whether the work requiring special inspection was, to the best of the inspector's knowledge, in

conformance with the approved plans and specifications and the applicable provisions of the applicable edition of the CBC.

Verification:

At least 15 days prior to the start of an activity requiring special inspection, the project owner shall submit to the CBO for review and approval, with a copy to the CPM, the name(s) and qualifications of the certified weld inspector(s), or other certified special inspector(s) assigned to the project to perform one or more of the duties set forth above. The project owner shall also submit to the CPM a copy of the CBO's approval of the qualifications of all special inspectors in the next Monthly Compliance Report.

STAN-FAC-7: Status of Construction

[LM-FAC-7]; [SPP-FAC-7]; [DEC-FAC-7]; [LP-FAC-7]; [HD-FAC-7]

Standard description of condition:

Project Owner shall keep the CBO informed regarding the status of construction and engineering.

Protocol:

Verification:

The project owner shall submit NCRs, as necessary, within five days, and shall submit a periodic construction progress report to the CBO according to the reporting frequency required by the CBO. A list of the NCRs for the reporting month shall also be included in the next Monthly Compliance Report.

STAN-FAC-8: Final approval of all completed work

[LM-FAC-8]; [SPP-FAC-8]; [DEC-FAC-8]; [LP-FAC-8]; [HD-FAC-8]

Standard description of condition:

Project Owner shall obtain the CBO's final approval of all completed work, request the CBO to inspect the completed structure and review the comments. When the work and the "as built" and "as graded" plans conform with the approval final plans, the project owner shall notify the CPM regarding the CBO's final approval. (Section 180-Inspection)

Protocol:

Condition has no protocol.

Verification:

Within 15 days of the completion of any work, the project owner shall submit to the CBO, with a copy to the CPM, (a) written notice that the completed work is ready for final inspection, and (b) a signed statement that the work conforms to the final approved plans.

STAN-FAC-9: Closure/Decommissioning Plan

[LM-FAC-9]; [DEC-FAC-9]; [LP-FAC-8]; [HD-FAC-9]

Standard description of condition:

Project Owner shall file a closure/decommissioning plan with the city and the CPM for review and approval at least 12 months prior to commencing the closure activities. If the

project is abandoned before construction is completed, the project owner shall return the site to its original condition.

Protocol:

Condition has no protocol

Verification:

At least twelve (12) months prior to closure or decommissioning activities, the project owner shall file a copy of the closure / decommissioning plan with San Bernardino and the CPM for review and approval.

STANDARD GEOLOGY FACILITY DESIGN CONDITIONS

STAN-GEO-FAC-1: Assigning Geologists

[LM-GEO-FAC-1]; [SPP-GEO-FAC-1]; [DEC-GEO-FAC-1]; [LP-GEO-1]; [HD-GEO-FAC-1]

Standard description of condition:

Prior to start of construction, the project owner shall assign to the project an engineering geologist(s), certified by the State of California to carry out the duties required by Appendix Chapter 33, Section 3309.4. Geologist assigned must be approved by the CPM.

Protocol:

Condition has no protocol.

Verification:

At least 30 days prior to the start of construction, the project owner shall submit to the CPM for approval, the name(s) and license number(s) of the certified engineering geologist(s) assigned to the project. The submittal should include a statement that CPM approval is needed. The CPM will approve or disapprove of the engineering geologist(s) and will notify the project owner of its findings within 15 days of receipt of the submittal. If the engineering geologist(s) is subsequently replaced, the project owner shall submit for approval the name(s) and license number(s) of the newly assigned individual to the CPM. The CPM will approve or disapprove of the engineering geologist(s) and will notify the project owner of the findings within 15 days of receipt of the notice of personnel change.

STAN-GEO-FAC-2: Duties of Geologist

[LM-GEO-FAC-2]; [SPP-GEO-FAC-2]; [DEC-GEO-FAC-2]; [LP-GEO-2]; [HD-GEO-FAC-2]

Standard description of condition:

Geologist shall carry out the duties required by Appendix Chapter 33, Section 3309.4 and Engineered Grading Requirement and Section 3318.1. – Final Reports.

Protocol:

The Engineering Geologist Report required by Appendix Chapter 33, Section 3309.3 – Grading Designations, and shall include an adequate description of the geology of the site, conclusions and recommendations regarding the effect of geologic conditions on the proposed development, and opinion on the adequacy, for the intended use, of the site as affected by geologic factors.

Verification:

Within 15 days after submittal of the application(s) for grading permit(s) to the CBO, the project owner shall submit a signed statement to the CPM stating that the Engineering Geology Report has been submitted to the CBO as a supplement to the plans and specifications and that the recommendations contained in the report are incorporated into the plans and specifications. Within 90 days following completion of the final grading, the project owner shall submit copies of the Final Geologic Report required by Appendix Chapter 33, Section 3309.3 to the CPM and the CBO.

STANDARD CIVIL FACILITY DESIGN CONDITIONS

STAN-CIV-FAC-1: Review and Approval

[LM-CIV-FAC1]; [SPP-CIV-FAC-1]; [DEC-CIV-FAC-1]; [LP-CIV-1]; [HD-CIV-FAC-1]

Standard condition of description:

Prior to the start of site grading, the project owner shall submit to the CBO for review and approval: 1) design of the proposed drainage structures and the grading plan; 2) an erosion and sedimentation control plan; 3) related calculations and specifications, signed and stamped by the responsible civil engineer; and 4) soils report as required by Appendix Chapter 33, Section 3309.5-Soils Engineering Report and Section 3309.6 – Engineering Geology Report.

Protocol:

Condition has no protocol.

Verification:

At least 15 days prior to the start of site grading, the project owner shall submit the documents described above to the CBO for review and approval. In the next Monthly Compliance Report following the CBO's approval, the project owner shall submit a written statement certifying that the documents have been approved by the CBO.

STAN-CIV-FAC-2: Unforeseen Adverse Soil

[LM-CIV-FAC-2]; [SPP-CIV-FAC-2]; [DEC-CIV-FAC-2]; [LP-CIV-2]; [HD-CIV-FAC-2]

Standard description of condition:

Resident Engineer shall stop all earthwork and construction in the affected areas when the responsible geotechnical engineer or civil engineer identifies unforeseen adverse soil or geologic conditions. The project owner shall submit modified plans, specifications and calculations to the CBO based on these new conditions. Project owner shall obtain approval from the CBO before resuming earthwork and construction in the affected areas.

Protocol:

Condition has no protocol.

Verification:

The project owner shall notify the CPM, within five days, when earthwork and construction is stopped as a result of unforeseen adverse geologic/soil conditions. Within five days of the CBO's approval, the project owner shall provide to the CPM a copy of the CBO's approval to resume earthwork and construction in the affected areas.

STAN-CIV-FAC-3: Inspections

[LM-CIV-FAC-3]; [SPP-CIV-FAC-3]; [DEC-CIV-FAC-3]; [LP-CIV-3]; [HD-CIV-FAC-3]

Project Owner shall perform inspections in accordance with Section 108 – Inspections, Chapter 17, and Section 1701.6 –Continuous and periodic special inspection and Appendix Chapter 33, Section 3317 – Grading inspection. All plant site operations shall be subject to inspection by the CBO and CPM.

Protocol:

Condition has no protocol.

Verification:

Within five days of the discovery of any discrepancies, the resident engineer shall transmit to the CBO and the CPM a non-conformance report (NCR), and the proposed corrective action. Within five days of resolution of the NCR, the project owner shall submit the details of the corrective action to the CBO and the CPM. A list of NCR's for the reporting month shall also be included in the following Monthly Compliance Report.

STAN-CIV-FAC-4: Erosion and Sedimentation

[LM-CIV-FAC-4]; [SPP-CIV-FAC-4]; [DEC-CIV-FAC-4]; [LP-CIV-4]; [HD-CIV-FAC-4]

Standard description of condition:

After completion of finished and erosion and sedimentation control and drainage facilities, the project owner shall obtain the CBO's approval of the final "as graded" grading plans, and final "as built" plans for the erosion and sedimentation control facilities. [Section 109-Certificate of Occupancy]

Protocol:

Condition has no protocol.

Verification:

Within 30 days of the completion of the erosion and sediment control mitigation and drainage facilities, the project owner shall submit to the CBO the responsible civil engineer's signed statement that the installation of the facilities and all erosion control measures were completed in accordance with the final approved combined grading plans, and that the facilities are adequate for their intended purposes. The project owner shall submit a copy of this report to the CPM in the next Monthly Compliance Report.

STANDARD STRUCTURAL FACILITY DESIGN CONDITIONS

STAN-STRUC-FAC-1: Design Plans and Drawings

[LM-STRUC-FAC-1]; [SPP-STRUC-FAC-1]; [DEC-STRUC-FAC-1]; [LP-STRUC-1]; [HD-STRUC-FAC-1]

Standard description of condition:

Prior to the start of any increment of construction, the project owner shall submit to the CBO for review and approval the applicable designs, plans and drawings and a list of those projected structures, components and major equipment items that will undergo dynamic structural analysis. Design plans and drawings shall be those for:

1. major project structures
2. major foundations, equipment supports and anchorage's
3. large field fabricated tanks

4. turbine/generator pedestal; and
5. switchyard structures

Protocol:

The project owner shall:

1. Obtain agreement with the CBO on the list of those structures, components and major equipment items to undergo dynamic structural analysis;
2. Meet the pile design requirements of the 1995 CBC. Specifically, Section 1807 – General Requirements, Section 1808- Specific Pile Requirements, and Section 1809 – Foundation Construction;
3. Obtain approval from the CBO for the final design plans, specifications, calculations, soils reports, and applicable quality control procedures. If there are conflicting requirements, the more stringent shall govern. All plans, calculations, and specifications for foundations that support structures shall be filed concurrently with the structure plans, calculations, and specifications;
4. Submit to the CBO the required number of copies of the structural plans, specifications, calculations, and other required documents of the designated major structures at least 90 days prior to the start of on-site fabrication and installation of each structure, equipment support, or foundation; and
5. Ensure that the final plans, calculations, and specifications clearly reflect the inclusion of approved criteria, assumptions, and methods used to develop the design. The final designs, plans, calculations and specifications shall be signed and stamped by the responsible design engineer.

Verification:

At least 30 days prior to the start of any increment of construction, the project owner shall submit to the CBO, with a copy to the CPM, the responsible design engineers signed statement that the final design plans, specifications and calculations conform with all of the requirements set forth in the Commission Decision.

STAN-STRUC-FAC-2: CBO Requirements

[LM-STRUC-FAC-2]; [SPP-STRUC-FAC-2]; [DEC-STRUC-FAC-2]; [LP-STRUC-2]; [HD-STRUC-FAC-2]

Standard description of condition:

The project owner shall submit to the CBO the required number of sets of the following:

1. Concrete cylinder strength test reports
2. Concrete pour sign-off sheets
3. Bolt torque inspection reports
4. Field weld inspection reports
5. Reports covering other structure activities requiring special inspections shall be in accordance with Chapter 17, Section 1701-Special Inspections, Section 1701.5 – Type of Work, Section 1702 – Structural Observation and Section 1703 – Nondestructive Testing.

Protocol:

Condition has no protocol.

Verification:

If a discrepancy is discovered in any of the above data, the project owner shall, within five days, prepare and submit an NCR describing the nature of the discrepancies to the

CBO, with a copy of the transmittal letter to the CPB. The NCR shall reference the condition(s) of certification and applicable CBC chapter and section. Within five days of resolution of the NCR, the project owner shall submit a copy of the corrective action to obtain CBO's approval.

STAN-STRUC-FAC-3: Design Changes

[LM-STRUC-FAC-3]; [SPP-STRUC-FAC-3]; [DEC-STRUC-FAC-3]; [LP-STRUC-3]; [HD-STRUC-FAC-3]

Standard description of condition:

The project owner shall submit to the CBO design changes to the final plans required by Chapter 1. Section 106.3.2 – Submittal documents and 106.3.3 – Information on plans and specifications, including the revised drawings, specifications, calculations, and a complete description of, and supporting rationale for the proposed changes, and shall give the CBO prior notice of the intended filing.

Protocol:

Condition has no protocol.

Verification:

On a schedule suitable to the CBO, the project owner shall notify the CBO of the intended filing of design changes, and shall submit the required number of set of revised drawings and the required number of copies of the other above-mentioned documents to the CBO, with a copy of the transmittal letter to the CPM. The project owner shall notify the CPM, via the Monthly Compliance Report, when the CBO has approved the revised plans.

STAN-STRUC-FAC-4: Hazardous Materials

[LM-STRUC-FAC-4]; [SPP-STRUC-FAC-4]; [DEC-STRUC-FAC-4]; [LP-STRUC-3]; [HD-STRUC-FAC-4]

Standard description of condition:

Tanks and vessels containing quantities of hazardous materials exceeding those amounts specified in Table 3E of Chapter 3 in the 1995 California Building Code shall, at a minimum, be designed to comply with Occupancy Category 2 (Hazardous facilities). Table 16-K of Chapter 16, in the 1995 CBC which requires use of the following seismic design criteria: $I = 1.25$, $I_p + 1.5$ and $I_w = 1.15$

Protocol:

Condition has no protocol.

Verification:

At least 30 days prior to the start of installation of the tanks or vessels containing sufficient quantities of highly toxic or explosive substances that would be hazardous to the safety of the general public if released, the project owner shall submit to the CBO for review and approval, final design plans, specifications, and calculations, including a copy of the signed and stamped engineer's certification.

STANDARD MECHANICAL FACILITY DESIGN CONDITIONS

STAN-MECH-FAC-1: Final Design Drawings

[LM-MECH-FAC-1]; [SPP-MECH-FAC-1]; [DEC-MECH-FAC-1]; [LP-MECH-1];
[HD-MECH-FAC-1]

Standard description of condition:

Prior to the start of any increment of piping construction, the project owner shall submit, for CBO review and approval, the proposed final design drawings, specifications and calculations for each plant piping system. The submittal shall also include the applicable QA/QC procedures. The project owner shall design and install all piping, other than domestic water, refrigeration, and small bore piping to the applicable edition of the CBC. Upon completion of construction of any piping system, the project owner shall request the CBO's inspection approval of said construction. [Section 106.3.2 – Submittal documents, Section 108.3 – Inspection Requests.] The CBO may require the project owner, as necessary, to employ special inspectors to report directly to the CBO to monitor shop fabrication or equipment installation. [Section 104.2.2 – Deputies.]

Protocol :

Mechanical Engineer shall submit a signed and stamped statement to the CBO when:

1. The proposed final design plans, specifications, and calculations conform with all of the piping requirements set forth in the Commission Decision: and
2. All of the other piping systems, except domestic water, refrigeration systems, and small bore piping, have been designed, fabricated, and installed in accordance with all applicable ordinances, regulations, laws and industry standards.

Verification:

At least thirty days prior to the start of any increment of piping construction, the project owner shall submit to the CBO for approval, with a copy of the transmittal letter to the CPM, the proposed final design plans, specifications, calculations and quality control procedures for that increment of construction of piping systems, including a copy of the signed and stamped engineer's certification of conformance with inspection approvals to the CPM in the Monthly Compliance Report following completion of any inspection.

STAN-MECH-FAC-2: Cal-OSHA Requirements

[LM-MECH-FAC-2]; [SPP-MECH-FAC-2]; [DEC-MECH-FAC-2]; [LP-MECH-2];
[HD-MECH-FAC-2]

Standard description of condition:

For all pressure vessels installed in the plant, the project owner shall submit to the CBO and California Occupational Safety and Health Administration (Cal-OSHA), prior to operation, the code certification papers and other documents required by the applicable LORS. Upon completion of the installation of any pressure vessel, the project owner shall request the appropriate CBO and /or Cal-OSHA inspection of said installation. [Section 108.3 – Inspection Requests.] The project owner shall send copies of the CBO plan check approvals to the CPM in the following Monthly Compliance Report. The project owner shall also transmit a copy of the CBO's and / or Cal-OSHA inspection approvals to the CPM in the Monthly Compliance Report following completion of any inspection.

Protocol:

The project owner shall:

Ensure that all boilers and fired and unfired pressure vessels are designed, fabricated and installed in accordance with the appropriate section of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, or other applicable code. Vendor certification, with identification of applicable code, shall be submitted for prefabricated vessels and tanks; and 2. Have the responsible design engineer submit a statement to the CBO that the proposed final design plans, specifications, and calculations conform to all of the requirements set forth in the appropriate ASME Boiler and Pressure Vessel Code or other applicable codes.

Verification:

At least 30 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of on-site fabrication or installation of any pressure vessel, the project owner shall submit to the CBO for review and approval, final design plans, specifications, and calculations, including a copy of the signed and stamped engineer's certification, with a copy of the transmittal letter to the CPM. The project owner shall send copies of the CBO plan check approvals to the CPM in the following Monthly Compliance Report. The project owner shall also transmit a copy of the CBO's and/or Cal-OSHA inspection approvals to the CPM in the Monthly Compliance Report following completion of any inspection.

STAN-MECH-FAC-3: HVAC Requirements

[LM-MECH-FAC-3]; [SPP-MECH-FAC-3]; [DEC-MECH-FAC-3]; [LP-MECH-3]; [HD-MECH-FAC-3]

Prior to the start of construction of any heating, ventilating, air conditioning (HVAC) or refrigeration system, the project owner shall submit to the CBO for review and approval the design plans, specifications, calculations, and quality control procedures for that system. Package HVAC systems, where used, shall be identified with the appropriate manufacture's data sheets. The project owner shall send copies of CBO comments and approvals to the CPM in the next Monthly Compliance Report. The project owner shall transmit a copy of the CBO's inspection approvals to the CPM in the Monthly Compliance Report following completion of any inspection.

Protocol:

The owner shall design and install all HVAC and refrigeration systems within buildings and related structures in accordance with the applicable edition of the CBC. Upon completion of any increment of construction, the project owner shall request the CBO's inspection and approval of said construction. The final plans, specifications and calculations shall include approved criteria, assumptions, and methods used to develop the design. In addition, the responsible mechanical engineer shall sign and stamp all plans, drawings, and calculations and submit a signed statement to the CBO that the proposed final design plans, specifications and calculations conform with the applicable LORS. [Section 108.7 — Other Inspections, Section 106.3.4 — Architect or engineer of record.]

Verification:

Verification: At least 30 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of construction of any HVAC or refrigeration system, the project owner shall submit to the CBO the required HVAC and refrigeration calculations, plans, and specifications, including a copy of the signed and stamped statement from the responsible mechanical engineer certifying compliance with the applicable edition of the CBC, with a copy of the transmittal letter to the CPM. The project owner shall send copies of CBO comments and approvals to the CPM in the next Monthly Compliance Report. The project owner shall transmit a copy of the CBO's inspection approvals to the CPM in the Monthly Compliance Report following completion of any inspection.

STAN-MECH-FAC-4: Plumbing System Conditions

[LM-MECH-FAC-4]; [SPP-MECH-FAC-4]; [DEC-MECH-FAC-4]; [LP-MECH-4]; [HD-MECH-FAC-4]

Standard description of conditions:

Prior to the start of each increment of plumbing construction, the project owner shall submit for CBO's approval the final design plans, specifications, calculations, and QA/QC procedures for all plumbing systems, portable water systems, drainage systems, toilet rooms, building energy conservation systems, and temperature control and ventilation systems, including water and sewer connection permits issued by the local agency. Upon completion of any increment of construction, the project owner shall request the CBO's inspection approval of said construction. [Section 108.3 – Inspection Requests. Section 108.4 – Approval required.] The final plans, specifications and calculations shall clearly reflect the inclusion of approved criteria, assumptions, and methods used to develop the design. In addition, the responsible mechanical engineer shall stamp and sign all plans, drawings, and calculations and submit a signed statement to the CBO that the proposed final design plans, specifications, and calculations conform with all of the requirements set forth in the Commission Decision.

Protocol:

The project owner shall design, fabricate, and install 1. Plumbing, potable water, all drainage systems, toilet rooms, in accordance with Title 24, California Code of Regulations, Division 5, Part 5, and the California Plumbing Code (or other relevant section(s) of the currently adopted California Plumbing Code and Title 24, California Code of Regulations); and 2. Building energy conservation systems and temperature control and ventilation systems in accordance with Title 24, California Code of Regulations, Division 5, Chapter 2-53, Part 2.

Verification:

At least 30 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of construction of any of the above systems, the project owner shall submit to the CBO the final design plans, specifications and calculations, including a copy of the signed and stamped statement from the responsible mechanical engineer certifying compliance with the applicable edition of the CBC, and send the CPM a copy of the transmittal letter in the next Monthly Compliance Report. The project owner shall

transmit a copy of the CBO's inspection approvals to the CPM in the next Monthly Compliance Report following completion of that increment of construction.

STANDARD ELECTRICAL FACILITY DESIGN CONDITIONS

STAN-ELEC-FAC-1: Electrical Systems Plans

[LM-ELEC-FAC-1]; [SPP-ELEC-FAC-1]; [DEC-ELEC-FAC-1]; [LP-ELEC-1]; [HD-ELEC-FAC-1]

Standard description of condition:

For the lower kV systems, the project owner shall not begin any increment of electrical construction until plans for that increment have been approved by the CBO. These plans, together with design changes and design change notices, shall remain on the site for one year after completion of construction. The project owner shall request that the CBO inspect the installation to ensure compliance with the requirements of applicable LORS. [Section 108.4 – Approval Required, and Section 08.3 Inspection Requests.] The following activities shall be reported in the Monthly Compliance Report:

1. Receipt or delay of major electrical equipment
2. Testing or energization of major electrical equipment; and
3. The number of electrical drawings approved, submitted for approval, and still to be submitted.

Protocol:

Condition has no protocol.

Verification:

Verification: At least 30 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of each increment of electrical construction, the project owner shall submit to the CBO for review and approval their final design plans, specifications and calculations, including a copy of the signed and stamped statement from the responsible electrical engineer attesting compliance with the applicable LORS, and send the CPM a copy of the transmittal letter in the next Monthly Compliance Report.

STAN-ELEC-FAC-2: Final Plant Designs

[LM-ELEC-FAC-2]; [SPP-ELEC-FAC-2]; [DEC-ELEC-FAC-2]; [LP-ELEC-2]; [HD-ELEC-FAC-2]

Standard description of condition:

The project owner shall submit to the CBO the required number of copies of items A and B for review and approval and one copy of item C: [Section 106.3.3 – Submittal documents.]

- A. Final plant design plans to include:
 1. one-line diagrams for the kV systems
 2. system grounding drawings
 3. other plans as required by the CBO
- B. Final plant calculations to establish:
 1. short-circuit ratings of plant equipment

2. ampacity of feeder cables
3. voltage drop in feeder cables
4. system grounding requirements
5. coordination study calculation for fuses, circuit breakers and protective relay settings for the kV systems
6. system grounding requirements
7. lighting energy calculations; and
8. other reasonable calculations as customarily required by the CBO.

Protocol:

Condition has no protocol.

Verification:

At least 30 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of each increment of electrical equipment installation, the project owner shall submit to the CBO for review and approval the final design plans, specifications and calculations, for the items enumerated above, including a copy of the signed and stamped statement from the responsible electrical engineer certifying compliance with the applicable LORS. The project owner shall send the CPM a copy of the transmittal letter in the next Monthly Compliance Report.

FACILITY DESIGN ANALYSIS FOR MVPP

INTRODUCTION

Facility Design encompasses the general, geological, civil, structural, mechanical, and electrical engineering aspects of the project. The purpose of Facility Design analysis is to verify that the laws, ordinances, regulations and standards (LORS) applicable to the design and construction of the project have been identified; and that the project and ancillary methods, to provide reasonable assurance that the project can be designed and constructed in accordance with all applicable LORS, and in any manner that protects environmental quality and assures public health and safety.

The analysis also examines whether special design features should be considered during final design to deal with conditions unique to the site which could influence public health and safety, environmental protection or the operational reliability of the project. The analysis further identifies the design review and construction inspection process and establishes conditions of certification that will be used to ensure compliance with the intent of the LORS and any special design requirements.

LAWS, ORDINANCES, REGULATIONS, AND STADARDS (LORS)

Mechanical LORS and Design Criteria

The Application for Certification (AFC) lists and describes the mechanical codes, standards and design criteria that will be employed in project design documents, procurement specifications and contracts. Design work will be performed in accordance with the appropriate LORS. This indicates that the applicant is aware of the codes, standards, and design criteria appropriate for such a project. This approach will likely

assure the project's mechanical systems are designed to the appropriate codes and standards.

SETTING

The proposed facility will be located on an existing facility currently being annexed by the City of Redlands in San Bernardino County. The project site consists of a total of 64 acres located adjacent to the Santa Ana River. The existing facility consists of two steam boiler generating units that feed into an immediately adjacent Southern California Edison (SCE) transmission facility and substation. The two existing units utilize groundwater in cooling towers for cooling purposes and provide a nominal gross output of 66 MW each. The proposed new facility will utilize 18.7 already hardpacked or paved acres of the site, mostly to the North of the existing facility.

IMPACTS

There are no impacts associated with MVPP in the facility design issue area.

MITIGATION

The twenty-five standard conditions ensure, when implemented, that no other mitigation is required for facility design.

Cumulative Impacts

Because there are no impacts associated with facility design, there are likewise no cumulative impact issues.

FACILITY CLOSURE

Facility closure can be either temporary or permanent. Temporary closure as shutdown for a period exceeding the time required for normal maintenance, including overhaul or replacement of the gas turbines. Causes for temporary closure could be a disruption in the natural gas supply, damage to the plant from earthquake, fire and storm, or other natural acts, or from owner decision to not operate the facility for a period of time due to economic or other reasons.

The Facility Closure Plan for the power plant will attempt to maximize the recycling of facility components. In addition, attempts will be made to sell unused chemicals back to suppliers or other purchasers or users. Equipment containing chemicals will be drained, cleaned, and shut down to assure public health and safety and to protect the environment. Non-hazardous and hazardous wastes will be disposed of in accordance with applicable LORS. The site will be secured 24 hours per day during decommissioning activities.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions:

MVPP will be in compliance with all LORS when constructed pursuant to the standard conditions.

Recommendations:

The standard conditions should be implemented.

MVPC'S CONDITIONS ANALYSIS

MVPP is a natural gas combined cycle project very similar to previously permitted projects. Thus, MVPP requires the same [25] standard conditions as have all previously permitted projects. The disposition of all past conditions is presented here.

DISPOSITION OF STANDARD CONDITIONS

General Comments Regarding Disposition

MVPC agrees in principle with each and every standard Facility Design condition. Several conditions, however, could be modified slightly to ensure better control over, and efficiency in, the control and management of construction. With this in mind, MVPC proposes slight additions of language or changes to certain conditions. Also, MVPC understands “days” to mean working days, that is days of the week where work is scheduled. Typically, working days do not include holidays and weekends.

Additionally, MVPC seeks to insert the following phrase in the verification language for a condition: “(or a lesser number of days mutually agreed to by the project manager and the CBO).” This language is already present in many standard conditions, and MVPC proposes to add it to STAN- STRUC-FAC-1 as well.

STAN-FAC-1 : Applicable

Requires project owner to design, construct and inspect the project in accordance with the California Building Code (CBC) and all other applicable LORS. MVPP agrees with and stipulates to this condition.

STAN-FAC-2: Applicable

Requires project owner to furnish to the CEC CPM and to the CBO, a schedule of facility design submittals, Master Drawing List and Specification List. MVPP agrees with and stipulates to this condition.

STAN-FAC-3: Applicable

Requires project owner to make payments to the CBO equivalent to the fees listed in Chapter 1, Section 107 and Table 1-A – Building Permit Fees, Appendix Chapter 33, Section 3310 and Table A-33-A- Grading Plan Review Fees, and Table A-33-B- Grading Permit Fees. MVPP agrees with and stipulates to this condition.

STAN-FAC-4: Applicable

Requires the project owner to assign a California registered architect, structural engineer/civil engineer, as a resident engineer, to be in responsible charge of the project. MVPP agrees with and stipulates to this condition.

STAN-FAC-5: Applicable

Requires project owner to assign at least one of each of the following California registered engineers to the project: A) a civil engineer; B) a geotechnical or civil engineer experienced and knowledgeable in the practice of soils engineering; C) a design engineer who is either a structural engineer or civil engineer who is fully competent and proficient in the design of power plant structures and equipment supports; D) a mechanical engineer; and E) an electrical engineer. MVPP agrees with and stipulates to this condition.

STAN-FAC-6: Applicable

Requires project owner to assign to the project qualified and certified special inspector (s) who shall be responsible for the special inspections required by Chapter 17. Section 1701 – Special Inspections and Section 1701.5 – Type of Work (requiring special inspection), Section 106.3.5 – Inspection and observation program. MVPP agrees with and stipulates to this condition.

STAN-FAC-7: Applicable

Requires project owner to keep the CBO informed regarding the status of construction and engineering. MVPP agrees with and stipulates to this condition.

STAN-FAC-8: Applicable

Requires project owner to obtain the CBO's final approval of all completed work, request the CBO to inspect the completed structure and review the comments. MVPP agrees with and stipulates to this condition.

STAN-FAC-9: Applicable

Requires project owner to file a closure/decommissioning plan with the city and the CPM for review and approval at least 12 months prior to commencing the closure activities. If the project is abandoned before construction is completed, the project owner shall return the site to its original condition. MVPP agrees with and stipulates to this condition.

DISPOSITION OF STANDARD GEOLOGICAL CONDITIONS

STAN-GEO-FAC-1: Applicable

Requires project owner to assign to the project an engineering geologist(s), certified by the State of California to carry out the duties required by Appendix Chapter 33, Section 3309.4. MVPP agrees with and stipulates to this condition.

STAN-GEO-FAC-2: Applicable

Requires geologist to carry out the duties required by Appendix Chapter 33. Section 3309.4 and Engineered Grading Requirement and Section 3318.1. – Final Reports. MVPP agrees with and stipulates to this condition.

DISPOSITION OF STANDARD CIVIL CONDITIONS

STAN-CIV-FAC-1: Applicable

Requires the project owner to submit to the CBO for review and approval: 1) design of the proposed drainage structures and the grading plan; 2) an erosion and sedimentation control plan; 3) related calculations and specifications, signed and stamped by the responsible civil engineer; and 4) soils report as required by Appendix Chapter 33, Section 3309.5-Soils Engineering Report and Section 3309.6 – Engineering Geology Report. MVPP agrees with and stipulates to this condition.

STAN-CIV-FAC-2: Applicable

Requires resident engineer to stop all earthwork and construction in the affected areas when the responsible geotechnical engineer or civil engineer identifies unforeseen adverse soil or geologic conditions. MVPP agrees with and stipulates to this condition.

STAN-CIV-FAC-3: Applicable

Requires project owner to perform inspections in accordance with Section 108 – Inspections, Chapter 17, and Section 1701.6 –Continuous and periodic special inspection and Appendix Chapter 33, Section 3317 – Grading inspection. MVPP agrees with and stipulates to this condition.

STAN-CIV-FAC-4: Applicable

Requires the project owner to obtain the CBO’s approval of the final “as graded” grading plans, and final “as built” plans for the erosion and sedimentation control facilities. MVPP agrees with and stipulates to this condition.

DISPOSITION OF STANDARD STRUCTURAL CONDITIONS

STAN-STRUC-FAC-1: Applicable (see comments)

Requires the project owner to submit to the CBO for review and approval, the applicable designs, plans and drawings and a list of those projected structures, components and mayor equipment items that will undergo dynamic structural analysis. MVPP agrees with and stipulates to this condition as noted below.

Comments Regarding Disposition:

MVPC would like to add to the protocol section of this condition language allowing the CBO and project owner to agree upon a lesser number of days for submittal of the required copies of plans.

Additionally, MVPC would like the verification of this condition to require the statement that must be submitted to refer to “plant design” vice “final design plans” since an agreement may have been reached with the CBO to submit final design plans later than 30 days prior. MVPC believes that the intent of this verification, to ensure plant is built in compliance with the Final Decision, will still be met.

STAN-STRUC-FAC-2: Applicable

Requires project owner to submit to the CBO the required number of sets of certain reports. MVPP agrees with and stipulates to this condition.

STAN-STRUC-FAC-3: Applicable

Requires project owner to submit to the CBO design changes to the final plans required by Chapter 1. Section 106.3.2 – Submittal documents and 106.3.3. MVPP agrees with and stipulates to this condition.

STAN-STRUC-FAC-4: Applicable

Requires that tanks and vessels containing quantities of hazardous materials exceeding those amounts specified in Table 3E of Chapter 3 in the 1995 California Building Code shall, at a minimum, be designed to comply with Occupancy Category 2 (Hazardous facilities). MVPP agrees with and stipulates to this condition.

DISPOSITION OF STANDARD MECHANICAL CONDITIONS

STAN-MECH-FAC-1: Applicable

Requires project owner to submit, for CBO review and approval, the proposed final design drawings, specifications and calculations for each plant piping system. MVPP agrees with and stipulates to this condition.

STAN-MECH-FAC-2: Applicable

Requires project owner to submit to the CBO and California Occupational Safety and Health Administration (Cal-OSHA), prior to operation, the code certification papers and other documents required by the applicable LORS. MVPP agrees with and stipulates to this condition.

STAN-MECH-FAC-3: Applicable

Requires project owner to submit to the CBO for review and approval the design plants, specifications, calculations, and quality control procedures for that system. MVPP agrees with and stipulates to this condition.

STAN-MECH-FAC-4: Applicable

Requires project owner to submit for CBO's approval the final design plans, specifications, calculations, and QA/QC procedures for all plumbing systems, portable water systems, drainage systems, toilet rooms, building energy conservation systems, and temperature control and ventilation systems, including water and sewer connection permits issued by the local agency. MVPP agrees with and stipulates to this condition.

DISPOSITION OF STANDARD ELECTRICAL CONDITIONS

STAN-ELEC-FAC-1: Applicable

Requires project owner to not begin any increment of electrical construction until plans for that increment have been approved by the CBO. MVPP agrees with and stipulates to this condition.

STAN-ELEC-FAC-2: Applicable

Requires project owner to submit to the CBO, the required number of copies of items A and B for review and approval and one copy of item C. MVPP agrees with and stipulates to this condition.

MVPC'S STIPULATED CONDITIONS OF CERTIFICATION

Pursuant to the above analysis MVPP stipulates to the following 25 standard conditions. For brevity purposes, the standard conditions language is not repeated except for STAN-STRUC-FAC-1, which MVPC has suggested changes to.

STAN-FAC-1: California Building Code

STAN-FAC-2: Facility Design Submittal

STAN-FAC-3: Building Permit Fees

STAN-FAC-4: Assign Resident Engineer

STAN-FAC-5: Resident Engineer

STAN-FAC-6: Certified Special Inspector

STAN-FAC-7: Status of Construction

STAN-FAC-8: Final Approval of all Completed Work

STAN-FAC-9: Closure/Decommissioning Plan

Standard Geologic Conditions

STAN-GEO-FAC-1: Assigning Geologist

STAN-GEO-FAC-2: Duties of Geologist

Standard Civil Conditions

STAN-CIV-FAC-1: Review and Approval

STAN-CIV-FAC-2: Unforeseen Adverse Soil

STAN-CIV-FAC-3: Inspections

STAN-CIV-FAC-4: Erosion and Sedimentation

Standard Structural Conditions

STAN-STRUC-FAC-1: Design Plans and Drawings

Standard description of condition:

Prior to the start of any increment of construction, the project owner shall submit to the CBO for review and approval the applicable designs, plans and drawings and a list of those projected structures, components and mayor equipment items that will undergo dynamic structural analysis. Design plans and drawings shall be those for:

1. major project structures
2. major foundations, equipment supports and anchorage's
3. large field fabricated tanks
4. turbine/generator pedestal; and
5. switchyard structures

Protocol:

The project owner shall:

1. Obtain agreement with the CBO on the list of those structures, components and major equipment items to undergo dynamic structural analysis;
2. Meet the pile design requirements of the 1995 CBC. Specifically, Section 1807 – General Requirements, Section 1808- Specific Pile Requirements, and Section 1809 – Foundation Construction;
3. Obtain approval from the CBO for the final design plans, specifications, calculations, soils reports, and applicable quality control procedures. If there are conflicting requirements, the more stringent shall govern. All plans, calculations, and specifications for foundations that support structures shall be filed concurrently with the structure plans, calculations, and specifications;
4. Submit to the CBO the required number of copies of the structural plans, specifications, calculations, and other required documents of the designated major structures at least 90 days (*or a lesser number of days mutually agreed upon by the project owner and the CBO*) prior to the start of on-site fabrication and installation of each structure, equipment support, or foundation; and
5. Ensure that the final plans, calculations, and specifications clearly reflect the inclusion of approved criteria, assumptions, and methods used to develop the design. The final designs, plans, calculations and specifications shall be signed and stamped by the responsible design engineer.

Verification:

At least 30 days prior to the start if any increment of construction, the project owner shall submit to the CBO, with a copy to the CPM, the responsible design engineers signed statement that the ***final design***, specifications and calculations conform with all of the requirements set forth in the Commission Decision.

STAN-STRUC-FAC-2: CBO Requirements

STAN-STRUC-FAC-3: Design Changes

STAN-STRUC-FAC-4: Hazardous Materials

Standard Mechanical Conditions

STAN-MECH-FAC-1: Final Design Drawings

STAN-MECH-FAC-3: Cal-OSHA Requirements

STAN-MECH-FAC-4: Plumbing System Conditions

Standard Electrical Conditions

STAND-ELEC-FAC-1: Electrical Systems Plans

STAND-ELEC-FAC-2: Final Plant Designs

UNRESOLVED ISSUES IN FACILITY DESIGN

MVPC is not aware of any facility design issues requiring further exploration, analysis or mitigation. MVPC submits the above-stipulated conditions believing that the area of facility design will be thus fully addressed.

POWER PLANT RELIABILITY

OVERVIEW

Power Plant Reliability addresses the reliability issues of the project to determine if the power plant is likely to be built in accordance with typical industry norms of reliability of power generation. CEC Staff uses this level of reliability as a benchmark because the resulting project would likely not degrade the overall reliability of the electronic system it serves.

The scope of this power plant reliability analysis covers:

- Equipment availability;
- Plant maintainability;
- Fuel and water availability; and
- Power plant reliability in relation to natural hazards.

LORS

Presently, there are no laws, ordinances, regulations, or standards (LORS) that establish either power plant reliability criteria or procedures for attaining reliable operation. However, the commission must make findings as to the manner in which the project is to be designed, sited and operated to ensure safe and reliable operation (California Code of Regulations, Title 20 Section 1752(c)). Staff takes the approach that a project is acceptable if it does not degrade the reliability of the utility system to which it is connected. This is likely the case if the project exhibits reliability at least equal to that of other power plants on that system.

PAST PROJECT RELIABILITY ANALYSIS

Sutter Power Plant

During abnormal conditions Sutter Power Plant was determined to adequately ensure that the project maintains normal levels of reliability. SPP was predicated to have an equivalent availability factor for all combined cycle units between 92 to 98 percent. The power plant was determined to meet industry norms for reliability if designed, constructed, and operated as proposed. The project would not degrade the overall reliability of the electrical system and would operate reliably in baseload and load following modes.

La Paloma

The estimated availability factor for the La Paloma Generating Project was 93 percent. The equipment availability, redundancy, maintenance, quality control, and facility design factors describe in the evidence of record made it likely that the La Paloma Generating Project will meet industry norms for reliability. Water and fuel supplies for the proposed project are available in quantities sufficient to ensure reliable project operation. The

project will not degrade the overall reliability of the electrical system nor contribute to a cumulative adverse impact to such system.

Delta Energy Center

Ensured equipment the estimated reliability factor was 93 to 98 percent availability by implementing quality assurance/quality control programs and by providing adequate redundancy of auxiliary equipment to prevent unplanned off-line events. Three parallel trains of gas turbine generators/HRSOs, as well as the double circuit 230-kv transmission lines provided inherent reliability. Planned outages for each turbine generators were scheduled in sequence during times of low regional electricity demand. There was adequate fuel and water availability for project operations. Delta Energy was determined to perform reliably in baseload and load following duty and cause no significant impacts to electric system reliability.

Los Medanos

Los Medanos was to provide up to 60 MW of electricity to USS-POSCO and the remaining capacity was to be sold on the spot market through California ISO. Applicant expected the project to operate as a baseload facility although there was a likelihood that the project might operate on a startup/shutdown mode on occasion. The project was designed to conform with industry norms and Staff concluded that Los Medanos would perform reliably in baseload and load following duty and cause no significant impacts to electric system reliability.

High Desert

The availability factor was consistent with industry standards. Equipment availability, redundancy, maintenance, quality assurance, quality control, and facility design factors described in the evidence of record made it likely that the High Desert Power Project would meet industry norms for reliability. Operation of the project would not degrade the overall reliability of the electrical system. Adequate fuel supplies were available to ensure reliable project operation. Applicant proposes to use water for cooling tower makeup and to feed the gas turbine generators inlet air coolers. Reliable supply of water was necessary in order to allow the High Desert Power Project to operate reliably.

MVPP RELIABILITY ANALYSIS

MVPP Description

MVPP meets the reliability requirements by use of its equipment availability, redundancy, maintenance, quality assurance, quality control, and facility design factors. Efficiency factors are complementary to the previously permitted projects. The emergency diesel generator was sized sufficient to allow a "black start" of the facility through units 1 and 2. The existing substation immediately adjacent to MVPP and the lack of need for new transmission lines indicate a reliable interconnection to the Southern California Edison grid. The SoCalGas pipeline will produce a reliable supply of gas and the middle aquifer and City of Redlands Waste Water Treatment Plant percolated effluent water supplies ensure a reliable and adequate supply ensure a reliable and adequate supply of cooling water.

Thus MVPP exhibits reliability at least equal to that of other plants on the system and will not degrade the reliability of the SCE system.

MVPP and each of the five approved power plants meet industry norms for reliability if designed, constructed and operated as proposed. Based on a review of the proposals, MVPP concludes that the plant will be built and operated in a manner consistent with industry norms for reliable operation. This should provide an adequate level of reliability.

POWER PLANT EFFICIENCY

OVERVIEW

The California Energy Commission (CEC) must review the efficiency of a power plant to determine if the project's consumption of energy may create a significant adverse impact on the environment and if so, what measures may be taken to mitigate the impact through increased efficiency of design and operation. For these reasons the CEC review of a project determines, if compared to current state-of-the-art projects, whether inefficient fuel consumption is likely and, if found, how it can be mitigated.

CEQA requires that environmental impacts be considered in power plant siting to identify alternatives to the project, and indicated how those significant effects of a project on the environment, identify alternatives to the project, and indicated how those significant effects can feasibly be mitigated or avoided. Efficiency analysis falls within this alternatives analysis required under CEQA.

PAST PROJECTS EFFICIENCY ANALYSIS

In the past five permitted projects, the CEC found:

Sutter Power Plant

While Sutter Power Plant (SPP) may experience efficiency reductions of up to five percent due to the use of dry cooling, the project design represents a fuel-efficient power plant configuration based on its intended use and presents no significant adverse impacts upon energy resources.

La Paloma

The project will employ gas turbines that are among the most fuel-efficient currently available. There will be no substantial increase in demand for natural gas and gas supplies far exceed the fuel requirements. Incorporating four power trains will allow the power plant to generate electricity at less than full load while maintaining optimum efficiency. Operational efficiency of the proposed project substantially exceeds that of steam boiler technology. La Paloma Generating Project will not consume natural gas in a wasteful, inefficient, or unnecessary manner.

Delta Energy Center

Delta Energy Center (DEC) will not cause any significant adverse impacts to energy supplies or energy resources. The project will conform with all applicable laws, ordinances, regulations, and standards relating to power plant efficiency.

Los Medanos

Los Medanos will create a substantial demand for natural gas in California and also not require the development of any new sources of energy. Only natural gas-burning technologies are feasible for this project. The project will employ modern F-class gas

turbines. As a highly efficient natural gas-fired power plant, Los Medanos will likely displace older, less efficient power plant.

High Desert

High Desert will employ gas turbines that are among the most fuel-efficient currently available, there G-class turbine is slightly more efficient than the F-class turbine. The project will not create a substantial increase in demand for natural gas. Gas supplies exceed the fuel requirements. Project design will allow the power plant to generate electricity at less than full load while maintaining optimal efficiency. Operational efficiency of the proposed project is consistent with that of comparable power plants and will not consume natural gas in a wasteful, inefficient manner.

LORS

State

California Environmental Quality Act, (CEQA)

Public Resource Code, Section 21002.1

Public Resource Code, Section 21061.1

Public Resource Code, Section 25134

Section 25540.6(a) of the Warren-Alquist Act

California Code of Regulations, Title 14, CEQA Guidelines, Appendix G

California Code of Regulations, Title 14, Section 15126(d)(3)

MVPP EFFICIENCY ANALYSIS

MVPP Description

The project will employ gas turbines among the most fuel-efficient available. The project will not create a substantial increase in demand for natural gas and gas supplies or exceed fuel requirements. The project's design, incorporating multiple power trains, will allow the power plant to generate electricity at less than full load while maintaining efficiency. Overall, the project will not cause any significant direct or indirect adverse impact upon energy resources.

MVPP employs the same basic technology as the previously permitted projects, namely "F" class turbines in combined cycle mode, with two independent sets, both sets relying on natural gas. The "F" class turbine in combined cycle mode presents a reliable and most efficient design. There are alternatives to the project that mitigate or avoid any significant impacts arising from possible inefficiencies.

MVPP believes that this project will not cause any significant adverse impacts to energy supplies or energy resources. The project will conform will all applicable laws, ordinances, regulations, and standards relating to power plant efficiency.

TRANSMISSION SYSTEM ENGINEERING

This section presents a comprehensive analysis of Transmission System Engineering issues, both in previously permitted projects and in the case of the Mountainview Power Plant (MVPP)²⁰. Previously permitted projects, all combined cycle, natural gas plants, are analyzed for their standard, categorical and unique conditions as well as what triggered each categorical and unique condition. Then, MVPP is juxtaposed with past projects allowing necessary conditions to be identified. A complete review of applicable laws, ordinances, regulations and standards (LORS) and the setting of the MVPP are presented. This foundation of past and present impacts and LORS allows Mountainview Power Company (MVPC) to stipulate to all necessary conditions that provide required mitigation and ensure LORS compliance. The section closes by identifying any outstanding issues not resolved by the stipulated conditions.

OVERVIEW OF TRANSMISSION SYSTEM ENGINEERING ISSUE AREA

The issue area of transmission system engineering has three (3) standard, which are listed below. The issue area of transmission system engineering involves assessing issues associated with constructing and operating a power plant. Because transmission system engineering involves essentially the same issues for any plant interconnecting with the grid, three standard conditions were imposed upon all five previously permitted projects. No categorical or unique conditions were set forth in any of the permitted projects.

PAST TRANSMISSION SYSTEM ENGINEERING CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-TSE-1	Transmission Facility Compliance	Yes
STAN-TSE-2	Requirements for Changes to Transmission Facility	Yes
STAN-TSE-3	Inspection Obligation for Compliance	Yes

²⁰ As in all the sections of this document, abbreviations are used for the last five permitted projects before the California Energy Commission. Those abbreviations are:

SPP = Sutter Power Plant
DEC = Delta Energy Center
LM = Los Medanos Energy Center
HD = High Desert
LP = La Paloma

STANDARD TRANSMISSION ENGINEERING SYSTEM CONDITIONS

STAN-TSE-1: Transmission Facility Compliance

[LP-TSE-1]; [SPP-TSE-1]; [DEC-TSE-1]; [LM-TSE-1]; [HD-TSE-1]

Standard condition language:

The project owner shall ensure that the design, construction and operation of the proposed transmission facilities will conform to requirements 1a through 1e listed below. The substitution of CPM approved “equivalent” equipment and equivalent switchyard configurations is acceptable. The following conditions will vary by project in terms of technical information.

- a. Breaker ratings
- b. Compliance with short circuit analysis
- c. CPUC STANDARD Order 95 compliance
- d. Construction and length of overhead lines
- e. Termination facilities and substation compliance with Cal ISO and PG&E interconnection standards (CPUC Rule 21).

Protocol:

Condition has no protocol.

Verification:

At least thirty (30) days prior to start of construction of transmission facilities, the project owner shall submit for approval to the CPM electrical one-line diagrams signed and sealed by a registered professional electrical engineer in responsible charge, a route map, and an engineering description of equipment and the configurations covered by requirements 1a through 1e above. Substitution of equipment and switchyard configurations shall be identified and justified by the project owner for CPM approval.

STAN-TSE-2: Requirements for Changes to Transmission Facility

[LP-TSE-2]; [SPP-TSE-2]; [DEC-TSE-2]; [LM-TSE-2]; [HD-TSE-2]

Standard condition language:

The project owner shall inform the CPM of any impending changes, which may not conform to the requirements of 1a through 1e of TSE-1, and request CPM approval to implement such changes. A detailed description of the proposed change and complete engineering, environmental, and economic rationale for the change shall accompany the request. Construction involving changed equipment or switchyard configurations shall not being without prior approval of the changes by the CPM.

Protocol:

Condition has no protocol.

Verification:

At least thirty (30) days prior to construction of transmission facilities, the project owner shall inform the CPM of any impending changes, which may not conform to requirements 1a through 1e of TSE-1 and request CPM approval to implement such changes.

STAN-TSE-3: Inspection Obligation for Compliance

[LP-TSE-3]; [SPP-TSE-3]; [DEC-TSE-3]; [LM-TSE-3]; [HD-TSE-3]

Standard condition language:

The project owner shall be responsible for the inspection of the transmission facilities during and after project construction and any subsequent CPM approved changes thereto, to ensure conformance with CPUC STANDARD Order 95 and Western's interconnection standards and these Conditions. In case of non-conformance, the project owner shall inform the CPM in writing of such non-conformance and describe the corrective actions to be taken.

Protocol:

Condition has no protocol.

Verification:

Within sixty (60) days after synchronization of the project, the project owner shall transmit to the CPM an engineering description(s), one-line drawings of the "as-built" facilities signed and sealed by a registered electrical engineer in responsible charge. A statement attesting to conformance with CPUC General Order 95, Western's interconnection standards and these conditions shall be concurrently provided. Within ten (10) days of any non-conformance, the project owner shall submit a written notification to the CPM as described in this Condition.

TRANSMISSION ENGINEERING SYSTEM ANALYSIS FOR MVPP**INTRODUCTION**

This section presents MVPC's analysis of the compliance of MVPP with LORS.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)**State**

California Public Utilities Commission (CPUC) General Order 95 (GO-95), "Rules for Overhead Electric Line Construction", formulates uniform requirements for construction of overhead lines. Compliance with this order ensures adequate service and safety to persons engaged in the construction, maintenance, operation or use of overhead electric lines and to the public in general.

CPUC Rule 21 provides standards for the reliable connection of parallel generating stations connected to participating transmission owners.

Western systems Coordinating Council (WSCC) Reliability Criteria provides the performance standards used in assessing the reliability of the interconnected system. These Reliability Criteria require the continuity of service to loads as the first priority and preservation of interconnected operation as a secondary priority. The WSCC Reliability Criteria includes the Reliability Criteria for Transmission System Planning, Poer Supply Design Criteria, and Minimum Operating Reliability Criteria. Analysis of the WSCC system is based to a large degree on WSCC Section 4 "Criteria for Transmission System

Contingency Performance” which requires that the results of power flow and stability simulations verify established performance levels. Performance levels are defined by specifying the allowable variations in voltage, frequency and loading that may occur on systems other than the one in which a disturbance originated. Levels of performance range from no significant adverse effect outside a system area during a minor disturbance (loss of load or facility loading outside emergency limits) to a performance level that only seeks to prevent system cascading and the subsequent blackout of island areas. While controlled loss of generation, load, or system separation is permitted in extreme circumstances, their uncontrolled loss is not permitted (WSCC 1998).

North American Electric Reliability Council (NERC) Planning Standards provide policies, standards, principles and guides to assure the adequacy and security of the electric transmission system. With regard to power flow and stability simulations, these Planning Standards are similar to WSCC’s Criteria for Transmission System Contingency Performance. The NERC planning standards provide for acceptable system performance under normal and contingency conditions, however the NERC planning standards apply not only to interconnected system operation, but also to individual service areas (NERC 1998).

Cal-ISO Reliability Criteria also provide policies, standards, principles and guides to assure the adequacy and security of the electric transmission system. With regard to power flow and stability simulations, these Planning Standards are similar to WSCC’s Criteria for Transmission System Contingency Performance and the NERC Planning Standards. However, the Cal-ISO Reliability Criteria also provide some additional requirements that are not found in the WSCC Criteria or the NERC Planning Standards. The Cal-ISO Reliability Criteria apply to all existing and proposed facilities interconnecting to the Cal-ISO controlled grid.

Cal-ISO Scheduling Protocols and Dispatch Protocols require conformance with NERC, WSCC, and Local Area Reliability and Planning Criteria. These standards will be applied to the assessment of the system reliability implications of the MEC project. Also of major importance to projects, which may sell through the California Power Exchange (Cal-PX), are the Cal-ISO Day/Hour Ahead Inter-zonal Congestion Management Scheduling Protocol (SP 4), and the Creating of Real Time Merit Order Stack (SP 11). The Congestion Management Scheduling Protocol.

Federal

No Federal LORS.

Local

No Local LORS.

SETTING

The proposed facility will be located on an existing facility currently being annexed by the City of Redlands in San Bernardino County. The project site consists of a total of 64 acres located adjacent to the Santa Ana River. The existing facility consists of two steam boiler generating units that feed into an immediately adjacent Southern California Edison (SCE) transmission facility and substation. The two existing units utilize groundwater in cooling towers for cooling purposes and provide a nominal gross output of 66 MW each. The proposed new facility will utilize 18.7 already hardpacked or paved acres of the site, mostly to the North of the existing facility.

The area can be best described as an industrial region with other industrial areas and a mixture of residential and commercial zones nearby. To the North of site lies the Santa Ana River, dry most of the year, which has numerous other industrial and commercial facilities along its side. Directly across the Santa Ana River is the former Norton Air Force Base, now the San Bernardino International Airport. It primarily serves as a commercial airport with large cargo planes flying in and out on a regular basis. The Santa Ana River itself has been highly disturbed, with reinforced or concrete channel banks, numerous surface mining operations going on to the North within the river bed.

To the East of the Site lie agricultural land and a water treatment facility. To the South lies agricultural land followed by the Highway -10 freeway. To the west lie commercial, light industrial and residential areas. The residential area is a small enclave to the Southwest of the facility.

PROJECT DESCRIPTION

The MVPP will provide a maximum electrical output of 1,056 MW. The site is located in the County of San Bernardino and is currently being annexed to the City of Redlands. The surrounding area can be best described as an industrial region and a mixture of residential and commercial zones nearby. To the North of the site lies the Santa Ana River. Directly across the Santa Ana River is the former Norton Air Force Base, now the San Bernardino International Airport. To the East of the site lie agricultural land and a water treatment facility. To the South lies agricultural land followed by the Highway 10 freeway.

The MVPP is located in the property adjacent to the San Bernardino switchyard. For this reason, MVPC has proposed this location as the interconnection point. The tie-in location requires only a short 230 kV connection between the main power transformers and the 230 kV San Bernardino switchyard. No new transmission lines or transmission line upgrades are required for this interconnection.

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IMPACTS

There are no impacts expected from MVPP when connected in accordance with SCE and Cal-ISO recommended procedures.

MITIGATION

No direct impacts are expected and thus no mitigation is required.

Cumulative Impacts:

FACILITY CLOSURE

The parallel operation of generating stations is controlled in part by CPUC Rule 21. This rule and standard utility practices for interconnecting a generating unit provide for the participating transmission owner (PTO) to have control of breakers and disconnect switches where the outlet line terminates (the Pastoria substation) and general control over the interconnected generators. Prior to construction and interconnection of a generating unit, the PTO reviews and comments on the plans and specifications for the power plant and termination equipment that is important to safe and reliable parallel operation; and inspects the interconnection facilities.

Contractual provisions may be developed to provide backup, or other power service, and codify procedures to be followed during parallel operation. Before generating stations are permitted to bid into the Cal-PX and be dispatched by the Cal-ISO, generator standards must be met and the generating station must commit to comply with instructions of the Cal-ISO dispatchers. All participating generators must sign a Participating Generator Agreement (Cal-ISO 1998a, Cal-ISO 1998b). Procedures for planned, unexpected temporary closure and unexpected permanent closure must be developed or verified to facilitate effective communication and Path 15 the set of lines that limit the import of power into Northern California from Southern California and hence the Southwestern United States. As an example, the PTO has control over the generating unit breakers so that only when the PTO's line crews have completed maintenance, for instance, and are clear of the line or other facilities, could the unit reclose the system. coordination between the generating station owner, the PTO and the Cal-ISO to ensure safety and system reliability. CPUC General Order 95, Rule 31.6 requires that "lines or portions of lines permanently abandoned shall be removed by their owners so that such lines shall not become a public nuisance or a hazard to life or property." A condition of certification will require compliance with this rule. The ability of the above LORS to reasonably assure safe and reliable conditions, in the event of facility closure, was evaluated for three scenarios:

PLANNED CLOSURE

This type of closure occurs in a planned and orderly manner such as at the end of its useful economic or mechanical life or due to gradual obsolescence. Under such circumstances, the requirement for the owner to provide a closure plan 12 months prior to closure, in conjunction with applicable LORS, is considered sufficient to provide

adequately for safety and reliability. For instance, a planned closure provides time for the owner to coordinate with the PTO to assure (as one example) that the PTO's system will not be closed into the outlet thus energizing the project substation. Alternatively, the owner may coordinate with the PTO to maintain some power service via the outlet line to supply critical station service equipment or other loads.

UNEXPECTED TEMPORARY CLOSURE

This unplanned closure occurs when the facility is closed suddenly and/or unexpectedly for a short term due to unforeseen circumstances such as a natural or other disaster or emergency. During such a closure the facility cannot insert power into the utility system. Closures of this sort can be accommodated by establishment of an on-site contingency plan. (See General Conditions Including Compliance Monitoring and Closure Plan.)

UNEXPECTED PERMANENT CLOSURE

This unplanned closure occurs when the project owner abandons the facility. This is considered to be a permanent closure. This includes unexpected closure where the owner remains accountable for implementing the on-site contingency plan. It can also include unexpected closure where the project owner is unable to implement the contingency plan, and the project is essentially abandoned. An on-site contingency plan, that is in place and approved by the CPM prior to the beginning of commercial operation of the facilities, will be developed to assure safety and reliability (see General Conditions Including Compliance Monitoring and Closure Plan). The PTO, in this instance, is Edison, e.g., the system owner to which the project is interconnected. These are mere examples, many more exist.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions:

MVPP will be reliably and safely interconnected with SCE's electric system by following the system interconnection study's proposals as supplemented by Cal-ISO's analysis.

Recommendations:

Standard conditions 1, 2, and 3 should be implemented. No unique conditions are required.

MVPC'S CONDITIONS ANALYSIS

DISPOSITION OF STANDARD CONDITIONS

TSE-1: Applicable

This condition requires the project owner to ensure that the design, construction and operation of the proposed transmission facilities will conform to the following:

- a. Breaker ratings
- b. Compliance with short circuit analysis
- c. CPUC STANDARD Order 95 compliance
- d. Construction and length of overhead lines
- e. Termination facilities and substation compliance with Cal ISO and PG&E

interconnection standards (CPUC Rule 21).
This condition is applicable to the MVPP as it ensures compliance with the applicable LORS

TSE-2: Applicable

This condition requires the project owner to inform the CPM of any impending changes, which may not conform to the requirements of condition TSE-1. It further requires the project owner to request CPM approval to implement such changes. Furthermore, a detailed description of the proposed change and complete engineering, environmental, and economic rationale for the change shall accompany the request. And, finally, this condition requires any construction involving changed equipment or switchyard configurations to seek approval of the changes by the CPM. To these ends, this condition is applicable to the MVPP as it ensures compliance with the applicable LORS

TSE-3: Applicable

This condition requires the project owner to be responsible for the inspection of the transmission facilities during and after project construction. It further requires any that subsequent CPM approved changes are in compliance with CPUC Standard Order 95, Western's interconnection standards and these conditions. This condition is applicable to the MVPP as it ensures compliance with applicable LORS

NEW NEEDED CONDITIONS

Standard conditions 1, 2, 3 address all waste management LORS and impacts for MVPP. For this reason, no other conditions are required.

MVPC'S STIPULATED CONDITIONS OF CERTIFICATION

Pursuant to the above analysis, three conditions, all standard, are required to ensure LORS compliance and impact mitigation. Accordingly, MVPC stipulates to the following conditions:

TSE-1: Transmission Facility Compliance

The project owner shall ensure that the design, construction and operation of the proposed transmission facilities will conform to requirements 1a through 1e listed below. The substitution of CPM approved "equivalent" equipment and equivalent switchyard configurations is acceptable. The following conditions will vary by project in terms of technical information.

- a. Breaker ratings
- b. Compliance with short circuit analysis,
- c. CPUC STANDARD Order 95 compliance,
- d. Construction and length of overhead lines,
- e. Termination facilities and substation compliance with Cal ISO and PG&E interconnection standards (CPUC Rule 21).

Verification: At least 30 days prior to start of construction of transmission facilities, the project owner shall submit for approval to the CPM electrical one-line diagrams signed and sealed by a registered professional electrical engineer in responsible charge, a route map, and an engineering description of equipment and the configurations covered by requirements 1a through 1e above. Substitution of equipment and switchyard configurations shall be identified and justified by the project owner for CPM approval.

TSE-2: Requirements for Changes to Transmissions Facility

The project owner shall inform the CPM of any impending changes, which may not conform to the requirements of 1a through 1e of TSE-1, and request CPM approval to implement such changes. A detailed description of the proposed change and complete engineering, environmental, and economic rationale for the change shall accompany the request. Construction involving changed equipment or switchyard configurations shall not begin without prior approval of the changes by the CPM.

Verification: At least 30 days prior to construction of transmission facilities, the project owner shall inform the CPM of any impending changes which may not conform to requirements 1a through 1e of TSE-1 and request CPM approval to implement such changes.

TSE-3: Inspection Obligation for Compliance

The project owner shall be responsible for the inspection of the transmission facilities during and after project construction and any subsequent CPM approved changes thereto, to ensure conformance with CPUC STANDARD Order 95 and Western's interconnection standards and these Conditions. In case of non-conformance, the project owner shall inform the CPM in writing of such non-conformance, the project owner shall inform the CPM in writing of such non-conformance and describe the corrective actions to be taken.

Verification: Within 60 days after synchronization of the project, the project owner shall transmit to the CPM an engineering description (s), one-line drawings of the "as-built" facilities signed and sealed by a registered electrical engineer in responsible charge. A statement attesting to conformance with CPUC General Order 95, Western's interconnection standards and these conditions shall be concurrently provided. Within 10 days of any non-conformance, the project owner shall submit a written notification to the CPM as described in this Condition.

UNRESOLVED ISSUES IN TRANSMISSION SYSTEM ENGINEERING

MVPC is not aware of any transmission system engineering issues requiring further exploration, analysis or mitigation. MVPC submits the above-stipulated conditions believing that the area of transmission system engineering will be thus fully addressed.

ALTERNATIVES

OVERVIEW

As required by the Warren –Alquist Act and the California Environmental Quality Act (CEQA), the Commission’s alternatives analysis reviews a reasonable range of feasible alternative sites that would attain most of the basic project objectives but also substantially reduce or avoid the potentially significant adverse impacts of the proposed project [Pub. Resources Code, 25540.6(b); [Cal. Code Regs., tit. 20, 1765 and tit, 14, 15126(a).] The analysis also includes a no project alternative, and a review of alternative technologies. [Cal. Code of Reg., tit. 14, 15126(e).] MVPP conducted an alternatives analysis and presented it in its AFC.

MVPP PROJECT DESCRIPTION

Mountainview Power Company, LLC (MVPC) proposes to expand an existing onsite gas-fired power plant by constructing additional generating units. The proposed additions will be a maximum 1,055.9 megawatt (MW) net (at ISO conditions) merchant facility utilizing advanced gas turbine/steam turbine combined cycle technology. MVPC purchased the former San Bernardino Generating Station from Southern California Edison (SCE) for potential expansion in 1998. The existing equipment at this site consists of two nominal 66 MW gross gas-fired generating units that were installed in the 1950’s. Each unit also includes a surface condenser cooling water system equipped with cooling towers and various auxiliary equipment required to support the power cycle. The units last received a major overhaul in 1982 and were placed in short-term reserve stand-by by SCE in 1987. The plant has been used as a peaking facility during the last few years.

The existing plant site includes 16.3 acres located at the northeast corner of San Bernardino Avenue and Mountain View Ave. The power plant site is in the process of being annexed by the City of Redlands.

The power plant and project related linear facilities are located in the San Bernardino Valley in a mixed-use area developed primarily as agricultural parcel, beyond which are the Santa Ana River, the Palm Meadows Gold Course, and the San Bernardino International Airport. SCE-owned transmission lines, a switchyard, and agricultural fields abut the power plant site to the east. San Bernardino Ave., abuts the power plant site to the south, beyond which are agricultural fields.

MVPP ALTERNATIVES ANALYSIS

Alternative Sites

Alternative locations for the plant were rejected because the existing plant provided ideal use of its transmission connection and other existing infrastructure. The existing plant provides was also situated ideally on the California power grid to provide power in an area that will continue to experience growth in electricity demand. Using a site that did not already contain a power facility would have increased the impact of the project.

Generation Technology Alternatives

The MVPC plant will be a merchant plant as defined by the CEC. As a merchant plant, the MVPC plant will be competing with other electricity generators selling electricity in the deregulated market. The natural gas-fired combined cycle technology proposed for use at the MVPC plant was selected after considering alternative generating technologies because a natural gas-fired facility is the cleanest and most efficient use of this fossil fuel resource, which also will allow MVPC to be competitive as a merchant plant for years to come.

The purpose of considering alternative generating technologies is to determine if any of the technologies could potentially avoid or substantially reduce significant environmental impacts from the proposed natural gas-fired combined-cycle technology. Other technologies were considered using the selection methodology as outlined in MVPP AFC.

No Project Alternatives

If the no project alternative were selected, then MVPC would continue operating the existing power plant for peaking purposes only. No new generating units would be added, and the existing power blocks would not be refurbished. Power would continue to be provided from the existing equipment, but without the improved reliability and efficiency that repowering would provide.

If the no project alternative were selected, it could result in increased environmental impacts for the region. Increased demand for electricity would be placed on the existing power plant and other older, less efficient power facilities, or additional power plants would have to be developed. Increased demand on the existing power plant could result in increased air emissions, visual impacts, noise, traffic, water, biological, and land use impacts. Therefore, modernization and expansion of the existing facility will be a more efficient use of regional infrastructure and energy resources.

Cooling Technology Alternatives

Dry cooling of the steam turbine condensers was considered as a replacement for water-cooled condensers. Dry cooling condensers are capital intensive, require additional construction time, and reduce overall plant efficiency by several percent resulting in increased fuel use, increased emissions, and increased labor for operation and maintenance. Sufficient water exists for water cooling of the proposed facility thus removing the need for dry cooling. Moreover, by using the contaminated middle aquifer and percolated effluent water from the City of Redlands WWTP, MVPC is producing beneficial uses and impacts to the region. The increased capital and operating costs associated with dry cooling eliminated this technology from further consideration.

Emission Control Alternative Technologies

MVPP selected Selective Catalytic Reduction (SCR) as the emission control technology for the project. SCONox and ZONON were rejected. SCR meets Best Available Control Technology (BACT) requirements and has the lowest cost and most proven track record

of the choices. SCONox was rejected primarily for its prohibitive cost increases over SCR.

CONCLUSION

The Warren-Alquist Act and the California Environmental Quality Act have been compiled with through MVPC's alternatives analysis. The project will not create any direct, indirect or cumulative significant environmental impacts and no alternatives would lessen such impacts.

APPENDIX A

Past Conditions of Certification

PAST AIR QUALITY CONDITIONS STANDARD AIR QUALITY CONSTRUCTION CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-AQ-1	Fugitive dust control plan	Yes
STAN-AQ-2	Prevention and Removal of Track-out	Yes
STAN-AQ-3	Heavy Equipment Maintenance	Yes
STAN-AQ-4	General Construction Mitigation Measures	Yes

STANDARD AIR QUALITY COMMISSIONING CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-AQ-5	Commission Plan for Turbines	Yes

STANDARD AIR QUALITY OPERATIONAL CONDITIONS *Best Available Control Technology*

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-AQ-6	Recommended Equipment Practice & Procedures	Yes

STANDARD AIR QUALITY OPERATIONAL CONDITIONS *Emission Limits (Hourly, Daily, Monthly, Annually)*

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-AQ-7	Emission Limit Accrual	Yes
STAN-AQ-8	Heat Input Rate Three Hour Period	Yes
STAN-AQ-9	Power Train Heat Input Rate One Calendar Day	Yes
STAN-AQ-10	Power Train Heat Input Rate Average Per Year	Yes
STAN-AQ-11	Auxiliary Boiler Heat Input Rate Three Hour Period	Yes

STAN-AQ-12	Auxiliary Boiler Heat Input Rate Average Per Year	Yes
STAN-AQ-13	Gas Turbine Heat Input Rate Per Calendar Day	Yes
STAN-AQ-14	HRSGs/Auxiliary Boiler Heat Input Rate Per Year	Yes
STAN-AQ-15	Annual Toxic Air Emissions	Yes
STAN-AQ-16	Two Year Tests on Exhaust Points	Yes
STAN-AQ-17	Maximum Emissions Per Calendar Year	Yes
STAN-AQ-18	Annual Duties of Operator (Gas Turbine/Horse's)	Yes
STAN-AQ-19	Annual Duties of Operator (Auxiliary Boilers)	Yes
STAN-AQ-20	Expiration of Unused Balance of Firing Hours	Yes
STAN-AQ-21	Firing of HRSG Duct Burners	Yes
STAN-AQ-22	Auxiliary Boilers – Sulfur Content	Yes
STAN-AQ-23	Auxiliary Boiler Requirements	Yes
STAN-AQ-24	Stack Height Requirements	Yes
STAN-AQ-25	Emission Requirements for Gas Turbines & HRSGs	Yes

STANDARD AIR QUALITY OPERATIONAL CONDITIONS

Start-Up Emission Limits

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-AQ-26	Start-Up and Shutdown Emissions Source Testing	Yes
STAN-AQ-27	Start-Up and Shutdown Emissions	Yes

STANDARD AIR QUALITY OPERATIONAL CONDITIONS

Offset Requirements

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-AQ-28	Emission Reduction Credits	Yes

STANDARD AIR QUALITY OPERATIONAL CONDITIONS***Toxics Emission Limits***

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-AQ-29	CO, NOx, Minimization Requirements	Yes
STAN-AQ-30	Emissions of CO and NOx for Gas Turbines, Auxiliary Boilers, and HRSGs	Yes
STAN-AQ-31	Installation and Operation of SCR Systems	Yes
STAN-AQ-32	NOx and CO Emission Limitations Compliance	Yes
STAN-AQ-33	Limits on Pollutant Emissions	Yes
STAN-AQ-34	Emissions Limits for Auxiliary Boilers	Yes
STAN-AQ-35	Emission Opacity	Yes
STAN-AQ-36	Public Nuisance (Emissions/Discharges)	Yes
STAN-AQ-37	Maximum Sulfur Contents of Natural Gas	Yes

STANDARD QUALITY OPERATIONAL CONDITIONS***Monitoring and Reporting Requirements***

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-AQ-38	Continuous Monitoring System	Yes
STAN-AQ-41	Ammonia Emission Source Testing	Yes
STAN-AQ-42	Submission of Reports as Required by District Rules	Yes
STAN-AQ-43	Record and Reports Retention	Yes
STAN-AQ-44	Acid Rain Program	Yes
STAN-AQ-45	Notification of Violations of Permit Conditions	Yes
STAN-AQ-46	Adequate Stack Sampling Ports	Yes

PAST PUBLIC HEALTH CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
UNI-PUB-1	Emission Controlled by Natural Gas Dehydrators Unless Not Required Per Health Risk Assessment	No
UNI-PUB-2	Cooling Tower Drift Eliminators Effectiveness Ensurance	Yes
UNI-PUB-3	Soil Analysis For Health Risks From Imported Soil	No

PAST WORKER SAFETY & FIRE PROTECTION CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-SAFE-1	Create and Submit Required Safety Programs for Construction	Yes
STAN-SAFE-2	Create and Submit Required Safety Programs for Operation	Yes
STAN-SAFE-3	Exterior Lighting In Compliance	Yes

**PAST TRANSMISSION LINE SAFETY
AND NUISANCE CONDITIONS**

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-TLSN-1	Construction of Transmission Line per Regulations	Yes
STAN-TLSN-2	Identify and Correct Transmission Line Interference Problems	Yes
STAN-TLSN-3	Measure Magnetic Field Strengths	No
STAN-TLSN-4	Keep Transmission Line Right of Way Free of Combustible	No
STAN-TLSN-5	Notice to Property Owners	No
STAN-TLSN-6	Ground Metallic Objects within Right of Way	No

PAST HAZARDOUS MATERIALS MANAGEMENT CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-HAZ-1	Hazardous Materials Less Than Reportable Quantities	Yes
STAN-HAZ-2	Risk Management and Safety Management Plans	Yes
STAN-HAZ-3	Adequate Funding for Fire Protection	Yes
CAT-HAZ-1	Aqueous Ammonia Storage	No
CAT-HAZ-2	Unexpected Facility Closure Plans	No

PAST WASTE MANAGEMENT CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-WASTE-1	Obtain Hazardous Waste Permissions Prior to Generating Hazardous Waste	No
STAN-WASTE-2	Report Any Waste Management Related Enforcement Action	Yes
STAN-WASTE-3	Submit Waste Management Plan	Yes
CAT-WASTE-1	Contaminated Soil Inspection	No
UNI-WASTE-1	Make Plan for Unexpected Closure of Facility	No
UNI-WASTE-2	Storage of Hazardous Waste Limited to 90 Days	No
UNI-WASTE-3	Installation of Forced Circulation Crystalizer	No

PAST LAND USE CONDITIONS

<i>CONDITION</i>	DESCRIPTION	APPLICABLE TO MVPP
STAN-LAND-1	Development Plans Approved by Local Authority	Yes
STAN-LAND-2	Development Plans for Site in Compliance with Local Requirements	Yes
STAN-LAND-3	Development Plans for Transmission Lines and Pipelines	Yes
UNI-LAND-1	Grant Open Area Easement for Unused Property	No
UNI-LAND-2	Construct Greenbelt	No

PAST TRAFFIC AND TRANSPORTATION CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-TRANS-1	Compliance with Cal Trans Limits On Vehicle Size and Weight	Yes
STAN-TRANS-2	Compliance with Cal Trans & County Limitations on Encroachment	Yes
STAN-TRANS-3	Compliance with State and Federal Regulations for Transport of Hazardous Materials	Yes
STAN-TRANS-4	Construction Traffic Control Plan and Implementation Program	Yes
STAN-TRANS-5	Roadway Repairs	Yes
CAT-TRANS-1	Designated Route Requirements	Yes
CAT-TRANS-2	Construction Work Hours to Avoid Peak Traffic Hours	No
UNI-TRANS-1	Safety Plan	No
UNI-TRANS-2	Construction of Water Lines	No
UNI-TRANS-3	Part 77 Requirements	No

PAST NOISE CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-NOISE-1	Notification of Commencement of Project Construction	Yes
STAN-NOISE-2	Documentation of Noise Complaints	Yes
STAN-NOISE-3	Submittal of a Noise Control Program	Yes
STAN-NOISE-4	Steam Blow Process	Yes
STAN-NOISE-5	Public Notification of Steam Blow Activities	Yes
STAN-NOISE-6	25-Hour Community Noise Survey	Yes
STAN-NOISE-7	Occupational Noise Survey	Yes
CAT-NOISE-1	Construction Work Time Limits	Yes

PAST VISUAL RESOURCES CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-VIS-1	Non-Reflective Colors	Yes
STAN-VIS-2	Non-Reflective Fencing	Yes
STAN-VIS-3	Lighting Plan	Yes
STAN-VIS-4	Screening, Landscaping and Other Related Plans	Yes
CAT-VIS-1	Placement of Electrical Transmission Poles	No
UNI-SPP-VIS-1	Matching Facilities	No
UNI-SPP-VIS-2	Lighting Modification	No
UNI-SPP-VIS-3	Restoration of Disturbed Areas During Construction	No
UNI-DEC-VIS-4	Installation of Temporary Aesthetic Screening	No
UNI-DEC-VIS-5	Installation of Aesthetic Screening	No
UNI-DEC-VIS-6	Aesthetic Enhancement Plan	No
UNI-LM-VIS-7	Sound Wall Construction	No
UNI-LM-VIS-8	Landscape Restoration	No
UNI-LM-VIS-9	Transmission Pole Height	No

PAST CULTURAL CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-CUL-1	Designated Cultural Resource Specialist and Mitigation Team Members	Yes
STAN-CUL-2	Provision of Maps and Drawings	Yes
STAN-CUL-3	Draft Cultural Resources Monitoring and Mitigation Plan	Yes
STAN-CUL-4	Pre-Construction Reconnaissance and Staking	Yes
STAN-CUL-5	Employee Training Program	Yes
STAN-CUL-6	Training Regarding Operation of Ground Disturbing Equipment	Yes
STAN-CUL-7	Weekly Project Activity Report to Designated Cultural Resource Specialist	Yes
STAN-CUL-8	Presence of the Designated Cultural Resource Specialist On-Site	Yes
STAN-CUL-9	Encounter of Sensitive Resources	Yes
STAN-CUL-10	Curation of Significant Cultural Resource Materials	Yes
STAN-CUL-11	Preliminary Cultural Resources Report	Yes
STAN-CUL-12	Final Cultural Resources Report	Yes
STAN-CUL-13	Provide Final Cultural Resources Report to CPM	Yes
STAN-CUL-14	Delivery of Collected Cultural Materials	Yes
CAT-CUL-1	Bureau of Land Management Archaeological Resource Use Permit	No
UNI-CUL-1	Cut and Cover Construction Method	No
UNI-CUL-2	Facility Closure Cultural Resources Plan	No

PAST SOCIOECONOMIC CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-SOC-1	Employment Recruiting Procedures and Procurement	Yes
STAN-SOC-2	Statutory School Facility Fees and Funding for Fire Facilities	Yes

PAST BIOLOGICAL CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-BIO-1	Approved Designated Biologist	Yes
STAN-BIO-2	Designated Biologist Duties	Yes
STAN-BIO-3	Utilize Designated Biologist	Yes
STAN-BIO-4	Implementation of Worker Environmental Awareness Program	Yes
CAT-BIO-1	Mitigation to Avoid Impacts to Wetlands	No
CAT-BIO-2	Compensation /Mitigation for Permanent Lost of Habitat	No
CAT-BIO-3	Mitigation Measures for Listed Species	No
CAT-BIO-4	USFWS Biological Opinion	Yes
CAT-BIO-5	Measures to Mitigate Impacts to Migratory Birds	No
CAT-BIO-6	Streambed Alteration Agreement	Yes
CAT-BIO-7	Approval of BRMIMP	Yes
UNI-BIO-1	Obtain Incidental Take Permit from CDFG	No
UNI-BIO-2	Memorandum of Understanding with California Department of Fish and Game	No
UNI-BIO-3	Written Report after Construction Regarding BRMIMP	No
UNI-BIO-4	Natural Gas Pipeline Builder must Comply with CEC Conditions	No
UNI-BIO-5	Comprehensive Mitigation Measures for Biological Resources	No

PAST SOIL AND WATER RESOURCES CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-WAT-1	Final Erosion Control & Revegetation Plan	Yes
STAN-WAT-2	Storm Water Pollution Prevention Plan	Yes
STAN-WAT-3	General Industrial Activities Storm Water Permit	Yes
CAT-WAT-1	Use of Reclaim Water Whenever Possible	No
CAT-WAT-2	Required Permits to Discharge to Wastewater Treatment Facility	No
UNI-SPP-WAT-1	Use Dry Cooling Only	No
UNI-SPP-WAT-2	No Discharge to Surface Water	No
UNI-SPP-WAT-3	Drainage Plan for Surface Water	No
UNI-HD-WAT-4	Limit on Water Source	No
UNI-HD-WAT-5	Provide Copy of Storage Agreement	No
UNI-HD-WAT-6	Provide copy of Will Serve Letter	No
UNI-HD-WAT-7	Injection Schedule	No
UNI-HD-WAT-8	Calculation of Banked Water Balance	No
UNI-HD-WAT-9	Banked Water Use	No
UNI-HD-WAT-10	Maintain Operational Control of Water Treatment Facility	No
UNI-HD-WAT-11	Monitor Aquifer Hydraulic Parameters	No
UNI-HD-WAT-12	Use HDPP Model to Monitor Hydraulic Conductivity of Aquifer	No
UNI-HD-WAT-13	Groundwater Level Monitoring	No
UNI-HD-WAT-14	Approved Water Treatment and Monitoring Plan	No
UNI-HD-WAT-15	Provide Access for Site Clean Up Efforts of Air Force	No

UNI-HD-WAT-16	Aquifer Storage and Recovery Agreement Required	No
UNI-HD-WAT-17	Use Flow Meters on Wells and Delivery Systems	Yes
UNI-HD-WAT-18	Limits On Use of Water Treatment Facilities	No

PAST GEOLOGY AND PALEONTOLOGICAL CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-PAL-1	Designated Paleontologic Resources Specialist	Yes
STAN-PAL-2	Draft Paleontologic Resource Monitoring and Mitigation Plan	Yes
STAN-PAL-3	Paleontologic Resources Training Program	Yes
STAN-PAL-4	Paleontologic Resources Reporting Preparations	Yes
STAN-PAL-5	Measures to Ensure Adequate Paleontologic Resource Monitoring	Yes
STAN-PAL-6	Paleontologic Resource Recovery	Yes
STAN-PAL-7	Preliminary Paleontologic Resources Report	Yes
STAN-PAL-8	Final Paleontologic Resources Report	Yes
CAT-PAL-1	Provide Paleontological Resources For Curation	No
CAT-PAL-2	Construction Period Paleontological Resources Management	No
CAT-PAL-3	Analysis of Recovered Fossil Materials in Facility Closure	Yes
UNI-PAL-1	Surveys and Staking	No
UNI-PAL-2	Final Alignment of all Linear Facilities	No
UNI-PAL-3	Reconnaissance Survey	No
UNI-PAL-4	BLM Paleontologic Resource Use Permit	No

PAST FACILITY DESIGN CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STANDARD GENERAL CONDITIONS		
STAN-FAC-1	California Building Code	Yes
STAN-FAC-2	Facility Design Submittal	Yes
STAN-FAC-3	Building Permit Fees	Yes
STAN-FAC-4	Assign Resident Engineer	Yes
STAN-FAC-5	Registered Engineer	Yes
STAN-FAC-6	Certified Special Inspector	Yes
STAN-FAC-7	Status of Construction	Yes
STAN-FAC-8	Final Approval of all Completed Work	Yes
STAN-FAC-9	Closure/Decommissioning Plan	Yes
STANDARD GEOLOGIC CONDITIONS		
STAN-GEO-FAC-1	Assigning Geologist	Yes
STAN-GEO-FAC-2	Duties of Geologist	Yes
STANDARD CIVIL CONDITIONS		
STAN-CIV-FAC-1	Review and Approval	Yes
STAN-CIV-FAC-2	Unforeseen Adverse Soil	Yes
STAN-CIV-FAC-3	Inspections	Yes
STAN-CIV-FAC-4	Erosion and Sedimentation	Yes
STANDARD STRUCTURAL CONDITIONS		
STAN-STRUC-FAC-1	Design Plans and Drawings	Yes
STAN-STRUC-FAC-2	CBO Requirements	Yes
STAN-STRUC-FAC-3	Design Changes	Yes
STAN-STRUC-FAC-4	Hazardous Materials	Yes
STANDARD MECHANICAL CONDITIONS		
STAN-MECH-FAC-1	Final Design Drawings	Yes
STAN-MECH-FAC-2	Cal –OSHA Requirements	Yes
STAN-MECH-FAC-3	HVAC Requirements	Yes
STAN-MECH-FAC-4	Plumbing System Conditions	Yes
STANDARD ELECTRICAL CONDITIONS		
STAN-ELEC-FAC-1	Electrical Systems Plans	Yes
STAN-ELEC-FAC-2	Final Plant Designs	Yes

RELIABILITY

N/A

EFFICIENCY
N/A

PAST TRANSMISSION SYSTEM ENGINEERING CONDITIONS

CONDITION	DESCRIPTION	APPLICABLE TO MVPP
STAN-TSE-1	Transmission Facility Compliance	Yes
STAN-TSE-2	Requirements for Changes to Transmission Facility	Yes
STAN-TSE-3	Inspection Obligation for Compliance	Yes

ALTERNATIVES
N/A

APPENDIX B

MVPC'S STIPULATED CONDITIONS OF CERTIFICATION

AIR QUALITY

There are no stipulated conditions at this time. A supplemental Air Quality section will be filed September 2000.

STIPULATED PUBLIC HEALTH CONDITIONS

PUB-1: Cooling Tower Drift Eliminators Effectiveness Assurance

The project owner shall perform a visual inspection of the cooling tower drift eliminators once per calendar year, and repair or replace any drift eliminator components which are broken or missing. Prior to initial operation of the project, the project owner shall have the cooling tower vendor's field representative inspect the cooling tower drift eliminator and certify that the installation was performed in a satisfactory manner. The CPM may, in years 5 and 15 of project operation, require the project owner to perform a source test of the PM10 emissions rate from the cooling tower to verify continued compliance with the vendor guaranteed drift rate.

Triggering Situation:

Use of reclaimed water from water treatment facility made drift eliminators necessary for LORS compliance

Verification:

The project owner shall include the results of the annual inspection of the cooling tower drift eliminators and a description of any repairs performed in the next required compliance report. The initial compliance report will include a copy of the cooling tower vendor's field representative's inspection report of the drift eliminator installation.

PUB-2: Cooling Tower TCE Emission Limit

The project owner shall ensure that use of middle aquifer water is limited such that each cooling tower shall not emit more than 16 pounds of tri chloral ethylene (TCE) per year.

Protocol:

The project owner shall perform weekly samples to verify TCE content of middle aquifer water. Project owner shall monitor and record total volume of middle aquifer pumped for each week to calculate total TCE emissions. Project owner shall assume that all TCE inserted into the cooling tower system evaporates.

Verification:

In the annual compliance report, MVPP will report total TCE emissions for each cooling tower.

STIPULATED WORKER SAFETY CONDITIONS

SAFE-1: Create and Submit Required Safety Programs for Construction

Project owner shall submit a copy of the Project Construction Safety and Health Program as follows: Construction Injury and Illness Prevention Program; Construction Fire Protection and Prevention Plan; and the Personal Protective Equipment Program.

Protocol:

The Construction Injury and Illness Prevention Program and the Personal Protective Equipment Program shall be submitted to the California Department of Industrial Relations, Division of Occupational Safety and Health (CAL/OSHA) Consultation Service, for review and comment concerning compliance of the program with all applicable Safety Orders. The Construction Fire Protection and Prevention Plan shall be submitted to the County Fire Department for review and acceptance.

Verification:

At least 30 days prior to the start of construction, or a date agreed to by the CPM, the project owner shall submit to the CPM, a copy of the Project Construction Safety and Health Program, incorporating Cal/OSHA's Consultation Service comments, and a letter from the City of Redlands Fire Department, stating that they have reviewed and accepted the Construction Fire Protection and Prevention Plan and the Personal Protective Equipment Program.

SAFE-2: Create and Submit Required Safety Programs for Operation

Project owner shall submit a copy of the Project Operation Safety and Health Program containing the following: Operation Injury and Illness Prevention Program; Emergency Action Plan; Operation Fire Protection Plan; and the Personal Protective Equipment Program.

Protocol:

The Operation Injury and Illness Prevention Plan, Emergency Action Plan, and Personal Protective Equipment Program shall be submitted to the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal-OSHA) Consultation Service, for review and comment concerning compliance of the program with all applicable Safety Orders.

Verification:

At least 30 days prior to the start of operation, the project owner shall submit to the CPM a copy of the final version of the Project Operation Safety & Health Program. It shall incorporate Cal/OSHA Consultation Service comments and a letter from the County Fire Department stating that they have reviewed and accepted the specified elements of the proposed Operation Safety and Health Plan.

The project owner shall notify the CPM that the Project Operation Safety and Health Program (Injury and Illness Prevention Plan, Fire Protection Plan, Emergency Action

Plan, and Personal Protective Equipment requirements), including all records and files on accidents and incidents, is present on-site and available for inspection.

SAFE-3: Exterior Lighting in Compliance

The project owner shall design and install all exterior lighting to meet the requirements contained in the Visual Resources Conditions of Certification and in accordance with the American National Standards Practice for Industrial Lighting, ANSI/IES-RP-7.

Verification:

Within 60 days after construction is completed, the project owner shall submit a statement to the CPM that the illuminance contained in ANSI/IES RP-7 were used as a basis for the design and installation of the exterior lighting.

STIPULATED TRANSMISSION LINE SAFETY AND NUISANCE CONDITIONS

TLSN-1: Construction of Transmission Line per Regulations

Project owner shall construct the proposed transmission line according to the requirements of GO-95 and Title 8, Section 2700 et seq. of the California Code of Regulations.

Verification:

Thirty days before start of transmission line construction, the project owner shall submit to the Commission's Compliance Project Manager (CPM) a letter signed by a California registered electrical engineer affirming that the transmission line will be constructed according the requirements of GO-95 and Title 8 Section 2700 et seq. of the California Code of Regulations.

TLSN-2: Identify and Correct Transmission Line Interference Problems

The project owner shall make every reasonable effort to identify and correct, on a case-specific basis, all complaints of interference with radio or television signals from operation of the line and related facilities. In addition to any transmission repairs, the relevant corrective actions should include, but shall not be limited to, adjusting or modifying receivers, adjusting or repairing, replacing or adding antennas, antenna signal amplifiers, filters, or lead-in cables.

The project owner shall maintain written records for a period of five years, of all complaints of radio or television interference attributable to operation together with the corrective action taken in response to each complaint. All complaints shall be recorded to include notations on the corrective action taken. Complaints not leading to a specific action or for which there was no resolution should be noted and explained. The record shall be signed by the project owner and also the complainant, if possible, to indicate concurrence with the corrective action or agreement with the justification for a lack of action.

Verification:

All reports of line-related complaints shall be summarized and included in the Annual Compliance Report to the CPM.

STIPULATED HAZARDOUS MATERIALS CONDITIONS

HAZ-1: Hazardous Materials Less Than Reportable Quantities

The project owner shall not use any hazardous material in reportable quantities, as specified in Code of Federal Regulations, Part 40, subpart F, Section 68.130, that is not listed in the attached Table, unless approved in advance by the CEC CPM.

Verification:

The project owner shall provide, in the Annual Compliance Report, a list of hazardous materials contained at the facility in reportable quantities.

HAZ-2: Risk Management and Safety Management Plans

The project owner shall provide an updated Risk Management Plan and Safety Management Plan to the City of Redlands Fire Department and the CEC CPM for review and approval at the time the plans are first submitted to the USEPA and the California OSHA. The project owner shall reflect all recommendations of the City of Redlands Fire Department and the CPM in the final document. A copy of the final plans, reflecting all comments, shall be provided to the City of Redlands Fire Department and the CPM once approved by EPA and Cal OSHA.

Verification:

At least sixty (60) days prior to the delivery of anhydrous ammonia to the facility the project owner shall provide the final approved plans listed above to the CPM.

HAZ-3: Adequate Funding for Fire Protection.

The project owner shall provide a letter from the City of Redlands Fire Department indicating that adequate funding for fire protection resources has been identified and that such funding will be available to the Department as needed to ensure adequate emergency response capability.

Verification:

At least thirty (30) days prior to delivery of anhydrous ammonia to the facility, the project owner shall provide a copy of the letter described above from the City of Redlands Fire Department.

STIPULATED WASTE MANAGEMENT CONDITIONS

WASTE-1: Obtain Hazardous Waste Permissions Prior to Generating Hazardous Waste

The project owner shall obtain a hazardous waste generator identification number and hazardous waste treatment permit for neutralization facilities from the Department of Toxic Substances Control prior to generating any hazardous waste.

Verification: The project owner shall keep copies of the identification number and permit on file at the project site and notify the CPM via the monthly compliance report of the receipt.

WASTE-2: Report Any Waste Management Related Enforcement Action.

The project owner shall notify the CPM of any waste management related enforcement action taken or proposed to be taken against it, or against any waste hauler or disposal facility or treatment operator that the owner contracts with.

Verification: The project owner shall notify the CPM in writing within 10 days of becoming aware of an impending enforcement action.

WASTE-3: Waste Management Plan

Prior to the start of both construction and of operation, the project owner shall prepare and submit to the County of San Bernardino and the CPM an updated waste management plan, business plan and facility closure plan for all wastes generated during construction and operation of the facility, respectively. The updated plans shall contain, at a minimum, the following:

- A description of all waste streams, including projections of frequency, amounts generated and hazard classifications; and
- Methods of managing each waste, including treatment methods and companies contracted with for treatment services, waste testing methods to assure correct classification, methods and companies contracted with for treatment services, waste testing methods to assure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization / reduction plans.

Verification: No less than thirty (30) days prior to the start of construction, the project owner shall submit the construction waste management plans to the County of San Bernardino and the CPM for review. The operation waste management plans shall be submitted no less than sixty (60) days prior to the start of project operation. The project owner shall submit any required revisions within thirty (30) days of notification of the need for such revisions by the CPM (or by a mutually agreed upon date).

In the Annual Compliance Report, the project owner shall document how actual waste management methods compared to planned management methods during the year.

STIPULATED LAND USE CONDITIONS

LAND-1: Development Plan Approved by Local Authority

Project owner must submit a development plan for the site to the City of Redlands. The project owner shall not implement the plans until approved by the CPM.

Protocol:

The project owner shall:

- Submit to the CEC Compliance Project Manager (CPM) for review and approval sit plans (for the power plant and electrical transmission structure) as required by Design Review;
- Provide evidence that the City had been consulted regarding the plans; and
- Attach any recommendations from the City.

Verification: At least sixty (60) days prior to the start of construction of the Project, the project owner shall submit the site plans to the CPM for review and approval. The submittal shall include any recommendations from the City.

LAND-2: Development Plans for Site in Compliance with Local Requirements

Site plan shall be in compliance with the City of Redlands Municipal Code, Title 18 (revised October 1998). Elements as part of the requirements to which the project shall conform are listed in the City of Redlands, Municipal Code, Title 18, Section 18.116 et. seq. These elements include uses generally; permitted uses; similar uses permitted by Commission determination; conditional uses; and, property development standards.

Protocol:

The project owner shall submit the proposed design criteria to the CPM and the City of Redlands for review and comment before implementing the work.

Verification: The project owner shall provide to the CPM, in a monthly Compliance Report, evidence of compliance with Section 18.266 of the City of Redlands Municipal Code as described above.

LAND-3: Development Plans for Transmission Lines and Pipelines

Project Owner shall ensure that the natural gas pipeline is constructed in compliance with all local requirements for all cities it is constructed in and for the County of San Bernardino.

Protocol:

Project Owner shall submit and obtain approval for pipeline construction plans to:

- 8) City of Rancho Cucamonga
- 9) City of Fontana
- 10) City of Rialto
- 11) City of Colton
- 12) City of San Bernardino
- 13) City of Redlands
- 14) County of San Bernardino

Verification: At least sixty (60) days prior to the start of construction of the pipeline, Project owner shall submit to the CPM a letter from each City and the County of San Bernardino that the natural gas pipeline project complies with city or county requirements.

STIPULATED TRAFFIC AND TRANSPORTATION CONDITIONS

TRANS-1: Compliance with CalTrans Limits on Vehicle Size and Weight

The project owner shall comply with California Department of Transportation (CalTrans) and County limitation on vehicle sizes and weights. In addition, the project owner or its contractor shall obtain necessary transportation permits from CalTrans and all relevant jurisdictions for both rail and roadway use.

Verification: In monthly compliance reports, the project owner shall submit copies of any oversize and overweight transportation permits received during that reporting period. In addition, the project owner shall retain copies of these permits and supporting documentation in its compliance file for at least six months after the start of commercial operation.

TRANS-2: Compliance with CalTrans & County Limitations on Encroachment

The project owner or its contractor shall comply with CalTrans and County limitations for encroachment into public right-of-way and shall obtain necessary encroachment permits from CalTrans and all relevant jurisdictions.

Verification: In monthly compliance reports, the project owner shall submit copies of any encroachment permits received during that reporting period. In addition, the project owners shall retain copies of these permits and supporting documentation in its compliance file for at least six months after the start of commercial operation.

TRANS-3: Compliance with State and Federal Regulations for Transport of Hazardous Materials

The project owner shall ensure that all federal and state regulations for the transport of hazardous materials are observed.

Verification: The project owner shall include in its monthly compliance reports copies of all permits and licenses acquired by the project owner and/or subcontractors concerning the transport of hazardous substances.

TRANS-4: Construction Traffic Control Plan and Implementation Program

Prior to start of construction, the project owner shall consult with county and will prepare a construction traffic control plan and implementation program which includes addressing the timing of heavy equipment and building materials deliveries; signing, lighting and traffic control device placement for natural gas pipeline and transmission line construction; and establishing construction work hours outside of peak traffic periods.

Verification: Thirty (30) days prior to construction, the project owner shall provide to the CPM and to San Bernardino County Public Works Department Plant for review and approval a copy of its construction traffic control plan and implementation program.

TRANS-5: Roadway Repairs

Based on the determined state of primary roadways to be used in the traffic control plan and implementation program and following construction of the power plant and all related facilities, the licensee shall repair those primary roadways to original or as near original condition as possible.

Verification: Thirty days prior to construction, the licensee shall photograph the primary roadways. The licensee shall provide the CPM and San Bernardino County with a copy of these photographs. Within 30 days of the completion of project construction, the licensee will meet with the CPM and San Bernardino County Public Works Department to determine and receive approval for the actions necessary and scheduled to complete the repair of those roadways to original condition as possible.

TRANS-6: Designated Route Requirements

Designated routes were necessary to ensure trucks did not go through residential areas, in front of schools, etc.

Verification: The project owner shall include this specific route in its contracts for truck deliveries and maintain copies onsite for inspection by the CPM.

TRANS-7: Construction Work Hours to Avoid Peak Traffic Hours

The Owner shall schedule construction work hours for project site that avoids morning (7 a.m. to 9 a.m.) and evening (4 p.m. to 6 p.m.) peak hour traffic periods (includes heavy truck traffic).

Verification: The project owner shall maintain a delivery log, which specifies , in part, the time and date of each delivery in the on-site compliance file.

STIPULATED NOISE CONDITIONS

NOISE-1: Notification of Commencement of Project Construction

At least fifteen (15) days prior to the start of rough grading, the project owner shall notify all residents within one mile of the site, by email or other effective means, of the commencement of project construction. At the same time, the project owner shall establish a telephone number for use by the public to report any undesirable noise conditions associated with the construction and operation of the project. If the telephone is not staffed 24 hours per day, the project owner shall include an automatic answering feature, with date and time stamp recording, to answer calls when the phone is unattended. This telephone number shall be posted at the project site during construction in a manner visible to passersby. This telephone number shall be maintained until the project has been operational for at least one year.

Verification: The project owner shall transmit to the CPM in the first Month Construction Report following the start of rough grading a statement, signed by the project manager, attesting that the above notification has been performed, and describing the method of that notification. This statement shall also attest that the telephone number has been established and posted at the site.

NOISE-2: Documentation of Noise Complaints

Throughout the construction and operation of the project, the project owner shall document, investigate, evaluate, and attempt to resolve all project related noise complaints. The project owner shall:

- Use the Noise Complaint Resolution Form or functionally equivalent procedure acceptable to the CPM, to document and respond to each noise complaint;
- Attempt to contact the person(s) making the noise complaint within 24 hours;
- Conduct an investigation to determine the source of noise related to the complaint;
- If the noise is project related, take all reasonable measures to reduce the noise at its sources; and
- Submit a report documenting the complaint and actions taken. The report shall include a complaint summary, including final results of noise reduction efforts; and if obtainable, a signed statement by the complainant stating that the noise problem is resolved to complainant's satisfaction.

Verification: Within thirty (30) days of receiving a noise complaint, the project owner shall file a copy of the Noise Complaint Resolution Form, or similar instrument approved by the CPM, with the San Bernardino County Community Services Department or Cities of Redlands, Colton, Rialto, Rancho Cucamonga, San Bernardino, or Fontana, as appropriate, and with the CPM documenting the resolution of the complaint. If mitigation is required to resolve a complaint, and the complaint is not resolved within a 30-day period, the project owner shall submit an updated Noise Complaint Resolution Form when the mitigation is finally implemented.

NOISE-3: Submittal of a Noise Control Program

Prior to the start of project construction, the project owner shall submit to the CPM for review a noise control program. The noise control program shall be used to reduce employee exposure to high noise levels during construction and also to comply with applicable OSHA standards.

Verification: At least 30 days prior to the start of rough grading, the project owner shall submit to the CPM the above referenced program. The project owner shall make the program available to OSHA upon request.

NOISE-4: Steam Blow Process

If a traditional, high-pressure steam blow process is employed, the project owner shall equip steam blow piping with a temporary silencer that quiets the noise of steam blows to no greater than 110 dBA measured at a distance of 100 feet. The project owner shall conduct steam blows only during the hours of 7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. weekends and holidays. If a modern low-pressure continuous steam blow process is employed, the project owner shall submit to the CPM a description of this process, with expected noise levels and projected hours of execution.

Verification: At least fifteen (15) days prior to the first low-pressure continuous steam blow, the project owner shall submit to the CPM drawings or other information describing the process, including the noise levels expected and the expected time schedule for execution of the process.

NOISE-5: Public Notification of Steam Blow Activities

The project owner shall conduct a public notification program, which will alert residents within one mile of the site prior to the start of steam blow activities. The notification shall include a description of the purpose and nature of the steam blow(s), the proposed schedule, the expected sound levels and the explanation that it is a one-time operation and not a part of normal plant operation.

Verification: At least fifteen (15) days prior to the first steam blow(s) the project owner shall notify all residents within one mile of the site of the planned steam blow activity, and shall make the notification available to other area residents in an appropriate manner. The notification may be in the form of letters to the area residences, telephone calls, fliers, or other effective means. Within five (5) days of notifying these entities, the project owner shall send a letter to the CPM confirming that they have been notified of the planned steam blow activities, including a description of the method(s) of that notification.

NOISE-6: 25-Hour Community Noise Survey

Upon first achieving an output of 80 percent or greater of rated capacity, the project owner shall conduct a 25-hour community noise survey, utilizing the same monitoring sites employed in the pre-project ambient noise survey as a minimum. The survey shall also include the octave band pressure levels to ensure that no new pure-tone noise components have been introduced. If the results from the survey indicate that operation

of the power plant causes noise levels in excess of 45 dBA measured at the nearest resident, additional mitigation measures shall be implemented to reduce noise to a level of compliance with this limit. No single piece of equipment shall be allowed to stand out as a dominant source of noise.

Verification: Within thirty (30) days after first achieving an output of 80% or greater of rated output, the project owner shall conduct the above described noise survey. Within thirty (30) days after completing the survey, the project owner shall submit a summary report of the survey to the [appropriate local governmental agency] and to the CPM. Included in the report will be a description of the above listed noise limits, and a schedule, subject to CPM approval, for implementing these measures. Within thirty (30) days of completion of installation of these measures, the project owner shall submit to the CPM a summary report of a new noise survey, performed as described above and showing compliance with this condition.

NOISE-7: Occupational Noise Survey

The project owner shall conduct an occupational noise survey to identify the noise hazardous areas in the facility. The survey shall be conducted within thirty (30) days after the facility is in full operation, and shall be conducted by a qualified person in accordance with the provisions of Title 8, California Code of Regulations, section 5095-5100 (Article 105) and Title 29, Code of Federal Regulations, Part 1910. The survey results shall be used to determine the magnitude of employee noise exposure. The project owner shall prepare a report of the survey results and, if necessary, identify proposed mitigation measures that will be employed to comply with the applicable California and federal regulations.

Verification: Within thirty (30) days after completing the survey, the project manager shall submit the noise survey report to the CPM. The project owner shall make the report available to OSHA upon request.

NOISE-8: Avoid Unnecessary Residential Annoyance

The project owner shall ensure that noise levels during non-exempt hours in residential areas near project site and along natural gas pipeline route are minimized and mitigated by:

- Identifying residential regions along pipeline route and scheduling noisy construction work during exempt hours in such areas whenever possible;
- Coordinate with appropriate City or County personnel when construction activities are required during non-exempt hours in residential areas due to traffic or logistical impact reasons to ensure such construction is minimized and mitigated;
- Mitigate such construction by using sound panels and other means as agreed upon with local authorities; and
- Attend to and resolve noise complaints as outlined in condition of certification

NOISE-2.

Verification: At least thirty (30) days prior to commencing construction in a particular City or in the County, project owner shall submit a report to the CPM indicating that project owner has met with that City or the County regarding an anticipated non-exempt residential construction likely to cause annoyances.

STIPULATED VISUAL RESOURCES CONDITIONS

VIS-1: Prior to the first electricity generation, the project owner shall treat the new project structures, buildings, and tanks visible to the public in non-reflective colors to blend with the agricultural setting.

Protocol: The project owner shall submit a treatment plan for the project to the CPM for review and approval. The treatment plan shall include:

- Specification, and 11"x17" color simulations of the treatment proposed for use on project structures, including structures treated during manufacture;
- A detailed schedule for completion of the treatment; and
- A procedure to ensure proper treatment maintenance for the life of the project.

If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall submit to the CPM a revised plan. After approval of the plan by the CPM, the project owner shall implement the plan according to the schedule and shall ensure that the treatment is properly maintained for the life of the project. For any structures that are treated during manufacture, the project owner shall not specify the treatment of such structures to the vendors until the project owner receives notification of approval of the treatment plan by the CPM. The project owner shall not perform the final treatment on any structures until the project owner receives notification of approval of the treatment plan from the CPM. The project owner shall notify the CPM within one week after all pre-colored structures have been erected and all structures to be treated in the field have been treated and the structures are ready for inspection.

Verification: Not later than 60 days prior to ordering any structures that are to be color treated during manufacture, the project owner shall submit its proposed plan to the CPM for review and approval.

If the CPM notifies the project owner that any revisions of the plan are needed before the CPM will approve the plan, within 30 days of receiving that notification, the project owner shall submit to the CPM a revised plan.

Not less than thirty days prior to first electricity generation, the project owner shall notify the CPM that all structures treated during manufacture and all structures treated in the field are ready for inspection. The project owner shall provide a status report regarding treatment maintenance in the Annual Compliance Report.

VIS-2: Any new fencing for the project shall be non-reflective.

Protocol: At least 30 days prior to ordering the fencing the project owner shall submit to the CPM for review and approval the specifications for the fencing documenting that such fencing will be non-reflective. If the CPM notifies the project owner that revisions

of the specifications are needed before the CPM will approve the submittal, the project owner shall submit to the CPM revised specifications.

The project owner shall not order the fencing until the project owner receives approval of the fencing submittal from the CPM.

The project owner shall notify the CPM within one week after the fencing has been installed and is ready for inspection.

Verification: At least 60 days prior to ordering the non-reflective fencing, the project owner shall submit the specifications to the CPM for review and approval.

If the CPM notifies the project owner that revisions of the submittal are needed before the CPM will approve the submittal, within 30 days of receiving that notification, the project owner shall prepare and submit to the CPM a revised submittal.

The project owner shall notify the CPM within seven days after completing installation of the fencing that the fencing is ready for inspection.

VIS-3: Project Owner shall design and install all new lighting, so that it is not visible from public viewing areas and illumination of the vicinity and the nighttime sky is numbered.

Protocol: The project owner shall develop and submit a lighting plan for the project to the CPM and the City of Redlands Planning Department for review and approval. The lighting plan shall require that:

- Lighting is designed so that exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of this outdoor lighting shall be such that the luminescence or light source is shielded to prevent light trespass outside the project boundary;
- High illumination areas not occupied on a continuous basis such as maintenance platforms or the main entrance are provided with switches or motion detectors to light the area only when occupied;
- A lighting complaint resolution form (similar in general format to that in Visual Attachment 1, which follows these Conditions) will be used by plant operations, to record all lighting complaints received and document the resolution of those complaints. All records of lighting complaints shall be kept in the on-site compliance file. If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall prepare and submit to the CPM a revised plan.
- Lighting shall not be installed before the plan is approved. The project owner shall notify the CPM when the lighting has been installed and is ready for inspection.

Verification: At least 60 days before ordering the exterior lighting, the project owner shall provide the lighting plan to the CPM and to the Sutter County Community Services Department for review and approval.

If the CPM notifies the project owner that any revisions of the plan are needed before the CPM will approve the plan, within 30 days of receiving that notification the project owner shall submit to the CPM a revised plan.

The project owner shall notify the CPM within seven days of completing exterior lighting installation that the lighting is ready for inspection.

VIS-4: By December 1 of the year in which ground disturbance related to construction of the power plant begins, the project owner shall implement a landscape plan that meets the requirements of the City of Redlands and provides a continuous screen of the proposed power plant from sensitive view areas. The screen shall be created along the northern boundaries of the property to the North along the proposed SART .

Protocol: The project owner shall submit to the CEC CPM for review and approval a specific plan describing its landscaping proposal, stating that it conforms to the City of Redlands Zoning Code and has been approved by the County. The plan shall include, but not be limited to:

- A detailed landscape plan, at a reasonable scale, which includes a list of proposed tree and shrub species and sizes and a discussion of the suitability of the plants for the site conditions and mitigation objectives.
- One objective shall be to provide year-round screening. To meet this objective evergreen species shall be used. This may require a berm to raise the tree roots above the water table. Another objective shall be to provide screening at least 75 feet tall for the total distance to be screened, except where clearance beneath the proposed transmission line requires shorter trees. Another objective shall be to use species that grow rapidly. The plan shall propose species and spacing to achieve these objectives. Trees to be planted shall be the optimal size to reach full height as rapidly as possible.
- Maintenance procedures, including any needed irrigation; and
- A procedure for replacing unsuccessful plantings.

If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall prepare and submit to the CPM a revised plan. The trees and shrubs shall not be planted before the plan is approved. The project owner shall notify the CPM when the trees and shrubs have been planted and are ready for inspection.

Verification: At least 90 days prior to the start of commercial operation of the project, the project owner shall submit the proposed landscape plan for the project to the CPM for review and approval. The CPM will respond to the project owner within 15 days of receipt of the landscaping plan. The project owner shall submit any required revisions within 30 days of notification by the CPM. The CPM will respond to the project owner within 15 days of receipt of the revised documents. The project owner shall notify the CPM within seven days after completing the proposed planting that the planting is ready for inspection.

STIPULATE CULTURAL RESOURCES CONDITIONS

CUL-1: Curation of Significant Cultural Resource Materials

The project owner shall ensure the recovery, preparation for analysis, identification and inventory, the preparation for curation and the delivery for curation of all significant cultural resource materials encountered and collected during mapping and mitigation activities.

Verification:

The project owner shall maintain in its compliance files, copies of signed contracts or agreements with the designated cultural rescue specialist and other qualified research specialists. These specialists will ensure the necessary recovery, preparation for analysis, identification and inventory, and preparation for curation of all significant cultural resource materials collected during monitoring, data recovery, mapping, and mitigation activities for the project. The project owner shall keep these files on-site and available for periodic audit by the CPM, for a period of at least two years after completion of the approved Final Cultural Resources Report.

CUL-2: Preliminary Cultural Resources Report

The project owner shall ensure preparation of a Preliminary Cultural Resources Report following completion of data recovery and site mitigation work.

Protocol:

The proposed scope of work shall include (but not be limited to): a. discussion of any analysis to be conducted on recovered cultural resource materials; b. discussion of possible results and findings, c. proposed research questions which may be answered or raised by analysis of the data recovered from the project; and d. an estimate of the time needed to complete the analysis of recovered cultural resource materials and prepare the Cultural Resources Report.

Verification:

The project owner shall ensure that the designated cultural resources specialist prepares the proposed scope of work within 90 days following completion of the data recovery and site mitigation work. Within 7 days after completion of the proposed scope of work, the project owner shall submit it to the CPM for review and written approval.

CUL-3: Final Cultural Resources Report

The project owner shall ensure preparation of a Final Cultural Resources Report following completion of data recovery and site mitigation work.

Protocol:

The Cultural Resources Report shall include (but not be limited to) the following for all projects:

- 6) description of pre-project literature search, surveys, and any testing activities;
- 7) maps of showing areas surveyed or tested;
- 8) description of any monitoring activities;
- 9) maps of any areas monitored; and,
- 10) conclusions and recommendations.

For projects in which cultural resources were encountered, include the items specified under a of CUL-2 and also provide: 1) site and isolate records and maps; 2) description of testing for, and determinations of, significance and potential eligibility; and 3) research questions answered or raised by the data from the project.

For projects regarding which cultural resources were recovered, include the items specified under a and b of CUL-2 and also provide:

- 5) descriptions (including drawings and/or photos) of recovered cultural materials;
- 6) results and findings of any special analyses conducted on recovered cultural resource materials;
- 7) an inventory list of recovered cultural resource materials; and,
- 8) the name and location of the public repository receiving the recovered cultural resources for curation.

Verification:

The project owner shall ensure that the designated cultural resources specialist completes the Cultural Resources Report within 90 days following completion of the analysis of the recovered cultural materials. Within 7 days after completion of the report, the project owner shall submit the Cultural Resources Report to the CPM for review and written approval.

CUL-4: Provide Final Cultural Resources Report to CPM

The project owner shall provide the CPM with an original copy of the Final Cultural Resources Report and other copies necessary to submit to the public institution receiving the recovered data and materials for curation.

Protocol:

The copies of the Cultural Resource Report to be sent to the curating repository, the SHPO, and the regional information center(s) shall include the following (based on the applicable scenario (a, b or c) set forth CUL-2: a. originals or original-quality copies of all text; b. originals of any topographic maps showing site and resource locations; c. originals or original-quality copies of drawings of significant or diagnostic cultural resource materials found during pre-construction surveys or during project-related monitoring, data recovery, or mitigation; and d. photographs of the site(s) and the various cultural resource materials recovered during project monitoring and mitigation and subjected to post-recovery analysis and evaluation. The project owner shall provide the curating repository with a set of negatives for all of the photographs.

Verification:

Within 30 days after receiving approval of the Cultural Resources Report, the project owner shall provide to the CPM documentation that the report has been sent to the public repository receiving the recovered data and materials for curation, the SHPO, and the appropriate archaeological information center(s). For the life of the project the project owner shall maintain in its compliance files copies of all documentation related to the filing of the CPM-approved Cultural Resources Report with the public repository receiving the recovered data and materials for curation, the SHPO, and the appropriate archaeological information center(s).

CUL-5: Delivery of Collected Cultural Materials

Within 30 days following the Final Cultural Resources Report with the CPM, etc., the project owner shall deliver for curation all cultural resource materials collected during data recovery and mitigation for the project.

Verification:

The project owner shall ensure that all recovered cultural resource materials are delivered for curation within 30 days after providing the CPM-approved Cultural Resource Report to the public repository receiving the recovered data and materials, to the SHPO, and to the appropriate archaeological information center(s).

For the life of the project the project owner shall maintain in its project history or compliance files, copies of signed contracts or agreements with the public repository to which the project owner has delivered for curation all cultural resource materials collected during data recovery and mitigation for the project.

CUL-6: Designated Cultural Resource Specialist and Mitigation Team Members

Prior to construction, the project owner shall provide the CEC CPM with the name(s) and qualifications of its designated cultural resource specialist and mitigation team members.

Protocol:

a. The statement of qualifications for the designated cultural resource specialist shall include all information needed to demonstrate that the specialist meets the minimum qualifications specified in the US Secretary of Interior Guidelines, as published by the State Office of Historic Preservation (1983). The minimum qualifications include the following:

4. a graduate degree in anthropology, archaeology, California history, cultural resource management, or a comparable field;
5. at least three years of archaeological resource mitigation and field experience in California; and,
6. at least one year of experience in each of the following areas:
 - i. leading archaeological resource field surveys;
 - j. leading site and artifact mapping, recording, and recovery operations;
 - k. marshalling and use of equipment necessary for cultural resource recovery and testing;
 - l. preparing recovered materials for analysis and identification;
 - m. determining the need for appropriate sampling and/or testing in the field and in the lab;
 - n. directing the analyses of mapped and recovered artifacts;
 - o. completing the identification and inventory of recovered cultural resource materials; and,
 - p. preparing appropriate reports to be filed with the receiving curation repository, the SHPO, all appropriate regional archaeological information center(s).

The statement of qualifications for the designated cultural resource specialist shall include:

4. a list of specific projects on which the specialist has previously worked;
5. the role and responsibilities of the specialist for each project listed; and,
6. the names and phone numbers of contacts familiar with the specialist's work on these referenced projects.

Verification:

At least 90 days prior to the start of project construction, the project owner shall submit the name and statement of qualifications of its designated cultural resource specialist to the CPM for review and written approval. At least 10 days but no more than 30 days prior to the start of construction, the project owner shall confirm in writing to the CPM that the approved designated cultural resource specialist will be available at the start of construction. And, furthermore, that the cultural resource specialist is prepared to implement the cultural resource Conditions of Certification. At least 10 days prior to the termination or release of a designated cultural resource specialist, the project owner shall

obtain CPM approval of the replacement specialist by submitting to the CPM the name and resume of the proposed new designated cultural resource specialist.

CUL-7: Provision of Maps and Drawings

Prior to construction, the project owner shall provide the designated cultural specialist and the CPM with maps and drawings for the project.

Verification:

At least 75 days prior to the start of construction on the project and linear facilities, the project owner shall provide the designated cultural resource specialist and the CPM with final drawings and site layouts for each project facility and maps at appropriate scale(s) for all areas potentially affected by project construction. If the designated cultural resource specialist requests enlargements or strip maps for linear facility routes, the project owner shall also provide a set of these maps to the CPM at the same time that they are provided to the specialist.

CUL-8: Draft Cultural Resources Monitoring and Mitigation Plan

Prior to construction, the designated cultural specialist shall prepare a draft Cultural Resources Monitoring and Mitigation Plan. The Cultural Resources Monitoring and Mitigation Plan shall include, but not be limited to, the following elements and measures:

- j. A proposed research design that includes a discussion of questions that may be answered by the mapping, data and artifact recovery conducted during monitoring and mitigation activities, and by the post-construction analysis of recovered data and materials.
- k. A discussion of the implementation sequence and the estimated time frames needed to accomplish all project-related tasks during the pre-construction, construction, and post-construction analysis phases of the project.
- l. Identification of the person(s) expected to perform each of the tasks and description of the mitigation team organizational structure and the inter-relationship of team roles and responsibilities. Specification of the qualifications of any professional team members.
- m. A discussion of the need for Native American observers or monitors, the procedures to be used to select them, the areas or post-mile sections where they will be needed, and their role and responsibilities.
- n. A discussion of measures such as flagging or fencing, to prohibit or otherwise restrict access to sensitive resource areas that are to be avoided during construction and/or operation, and identification of areas where these measures are to be implemented. The discussion shall address how these measures will be implemented prior to the start of construction and how long they will be needed to protect the resources from project-related effects.
- o. A discussion of where monitoring of project construction activities is deemed necessary by the designated cultural resource specialist. The specialist will determine the size or extent of the areas where monitoring is to occur and will establish the percentage of the time that the monitor(s) will be present. The areas to be monitored shall include the power plant site, the construction lay-down area, the natural gas pipeline route, and the 230 kV electric transmission line route.
- p. A discussion of the requirement that all cultural resources encountered will be recorded and mapped (may include photos) and all significant or diagnostic resources will be collected for analysis and eventual curation into a retrievable storage collection in a public repository or museum that meets the US Secretary of Interior standards and requirements for the curation of cultural resources.

- q. A discussion of the availability and the designated specialists access to equipment and supplies necessary for site mapping, photographing, and recovering any cultural resource materials encountered during construction.
- r. Identification of the public institution that has agreed to receive any data and cultural resources recovered during project-related monitoring and mitigation work. Discussion of any requirements, specifications, or funding needed for the materials to be delivered for curation and how they will be met. Also include the name and phone number of the contact person at the institution.

Verification:

At least 60 days prior to the start of construction on the project, the project owner shall provide the Cultural Resources Monitoring and Mitigation Plan, prepared by the designated cultural resource specialist, to the CPM for review and written approval.

CUL-9: Pre-construction Reconnaissance and Staking

Prior to construction, the project owner shall conduct a pre-construction reconnaissance and staking in all areas expected to be affected by construction and operation of the project and its associated linear facilities.

Verification:

Throughout the project construction period, the project owner shall ensure that the daily log and weekly summaries are available for periodic audit by the CPM. Upon request by the CPM, the project owner shall provide specified weekly summaries to the CPM.

CUL-10: Employee Training Program

Prior to construction, the designated cultural resource specialist shall prepare an employee training program. The program shall be submitted to the CEC CPM. The training program shall discuss the potential to encounter cultural resources in the field, the sensitivity and importance of these resources, and the legal obligations to preserve and protect such resources.

The training program shall also include the set of resource reporting procedures and work curtailment procedures that workers are to follow if previously unknown cultural resources are encountered during project activities. The training program shall be presented by the designated cultural resource specialist or qualified individual(s) approved by the CPM and may be combined with other training programs prepared for biological resources, paleontological resources, hazardous materials, or any other areas of interest or concern.

Verification:

At least 60 days prior to the start of construction on the project, the project owner shall submit to the CPM for review and written approval, the proposed employee training program, the set of reporting procedures, and the work curtailment procedures that the workers are to follow if previously unknown cultural resources are encountered during construction. The project owner shall provide the name and resume of the individual(s) performing the training.

CUL-11: Training Regarding Operation of Ground Disturbing Equipment

Prior to and throughout construction, the cultural resource specialist shall provide training to all new employees, project managers, construction supervisors, and workers who operate ground-disturbing equipment.

Verification:

Within 7 days after the start of construction, the project owner shall provide the CPM with documentation that the designated cultural resources trainer(s) has/have provided to all project managers, construction supervisors, and workers hired before the start of construction the CEC-approved cultural resources training and the set of reporting and work curtailment procedures.

In each Monthly Compliance Report after the start of construction, the project owner shall provide the CPM with documentation that the designated cultural resource trainer(s) has/have provided to all project managers hired in the month to which the report applies the CPM-approved cultural resources training and the set of reporting and work curtailment procedures.

CUL-12: Weekly Project Activity Report to Designated Cultural Resource Specialist

Throughout the project construction period, the project owner shall provide the designated cultural resource specialist with a current schedule of anticipated weekly project activity and a map indicating the area(s) where construction will occur.

Verification:

At least 10 days prior to the start of construction involving ground-disturbing activities, and in each monthly compliance report, the project owner shall provide the CPM with copies of the schedules and maps provided to the designated cultural resource specialist. The project owner shall notify the CPM when all ground disturbing activities, including landscaping, are completed.

CUL-13: Presence of the Designated Cultural Resource Specialist On-Site

The designated cultural resource specialist shall be present at the construction site at all times when construction-related grading, excavation, trenching an/or auguring occurs in areas of previously recorded archaeological sites.

Protocol:

If the designated cultural resource specialist determines that full-time monitoring is not necessary in certain portions of the project area or along portions of the linear facility routes, the designated specialist shall notify the project owner and the CPM of the changes. The designated cultural resource specialist shall use milepost markers and boundary stakes placed by the project owner to identify areas where monitoring is being reduced or is no longer deemed necessary.

Verification:

Throughout the project construction period the project owner shall include in the Monthly Compliance Reports to the CPM copies of the weekly summary reports prepared by the designated cultural resource specialist regarding project-related cultural resource monitoring.

CUL-14: Encounter of Sensitive Resources

The designated cultural resource specialist or their delegated monitor shall have the authority to halt or redirect construction if potentially significant previously unknown cultural resource sites or materials are encountered during project-related grading, auguring, excavation, and/or trenching. If such resources are found and the specialist determines that they are not significant, the specialist may allow construction to resume. The project owner shall notify the CPM of the find as set forth in the Verification section. If such resources are found and the specialist determines that they are or may be significant, the halting or redirection of construction shall remain in effect until:

- d. the designated cultural resources specialist has notified the CPM of the find and the work stoppage;

- e. the specialist, the project owner, and the CPM have conferred and determined what, if any, data recovery or other mitigation is needed; and,
- f. any necessary data recovery and mitigation has been completed.

The designated cultural resources specialist, the project owner, and the CPM shall confer within five working days of the notification of the CPM to determine what, if any, data recovery or other mitigation is needed.

If data recovery or other mitigation measures are required, the designated cultural resource specialist and team members shall monitor construction activities and implement data recovery and mitigation measures, as needed.

All required data recovery and mitigation shall be completed expeditiously unless all parties agree to additional time.

Verification:

At least 30 days prior to the start of construction, the project owner shall provide the CPM with a letter confirming that the designated cultural resources specialist has the authority to halt construction activities in the vicinity of a cultural resource find.

For any cultural resource encountered that the specialist determines is or may be significant, the project owner shall notify the CPM as soon as possible.

For any cultural resource encountered that the specialist determines is not significant, the project owner shall notify the CPM within 72 hours after the find.

STIPULATE SOCIOECONOMICS CONDITIONS

SOCIO-1: Employment Recruiting Procedures

Project Owner and its contractors and subcontractors shall recruit employees and procure materials and supplies within the County first unless

- To do so will violate federal and / or state statutes;
- The materials and / or supplies are not available; or
- Qualified employees for specific jobs or positions are not available ; or

There is a reasonable basis to hire someone for a specific position from outside the local area, which shall include compliance with negotiated labor agreements.

Verification:

At least thirty (30) days prior to the start of construction, the project owner shall submit to the California Energy Commission (CEC) Compliance Project Manager (CPM) copies of contractor, subcontractor, and vendor solicitations and guidelines stating hiring and procurement requirements and procedures. In addition, the project owner shall notify the CEC in each Monthly Compliance Report of the reasons for any planned procurement of materials or hiring outside the local regional area that will occur during the next two months. The CEC and CPM shall review and comment on the submittal as needed.

SOCIO-2: Statutory School Facility Fees and Funding for Fire Facilities

Project Owner shall reach agreement with City of Redlands and pay statutory or agreed school facility development fee and statutory or agreed fire facilities fees or equipment.

Verification:

At least 30 days prior to the start of construction, the project owner shall submit to the CPM a copy of the agreement with the appropriate authority which states the amount of fees and timing of payment the project owner will provide to cover project-specific impacts associated with hazardous materials handling and fire protection.

STIPULATED BIOLOGICAL RESOURCES CONDITIONS

BIO-1: Approved Designated Biologist

Construction site and/or ancillary facilities preparation shall not begin until an Energy Commission Compliance Project Manager (CPM) approved designated biologist is available on site. The CPM approved designated biologist shall perform the following duties: 1) advise the project owner's supervising construction or operations engineer on the implementation of the biological resource Conditions of Certification; 2) supervise or conduct mitigation, monitoring, and other biological resource compliance efforts, particularly in areas requiring avoidance or containing sensitive biological resources, such as wetlands and special statues species; and 3) notify the project owner and the CPM of any non-compliance with any Condition.

Protocol:

The designated biologist must meet the following minimum qualifications:

- A bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field,
- Three years of experience in field biology or current certification of a nationally recognized biological society, such as the Ecological
- Society of America or The Wildlife Society,
- One year of field experience with resources found in or near the project area, and
- Ability to demonstrate to the satisfaction of the CPM the appropriate education and experience for the biological resource tasks that must be addressed during project construction and operation.

If the CPM determines the proposed designated biologist to be unacceptable, the project owner shall submit another individual s name and qualifications for consideration.

If the approved designated biologist needs to be replaced, the project owner shall obtain approval of a new designated biologist by submitting to the CPM the name, qualifications, address, and telephone number of the proposed replacement. No disturbance will be allowed in any designated sensitive area(s) until the CPM approves a new designated biologist and that designated biologist is on site.

Verification: At least 30 days prior to the start of surface disturbing activities at the project site and/or at ancillary facilities, the project owner shall submit to the CPM for approval, the name, qualifications, address, and telephone number of the individual selected by the project owner as the designated biologist. If a designated biologist is replaced, the information on the proposed replacement as specified in the condition must be submitted in writing to the CPM.

If the project owner is not in compliance with any aspect of this condition, the CPM will notify the project owner of making this determination within 14 days of becoming aware of the existence of any noncompliance. Until the project owner corrects any identified problem, construction activities will be halted in areas specifically identified by the CPM or designee as appropriate to assure the potential for significant biological impacts is avoided.

For any necessary corrective action taken by the project owner:

- The CPM shall make a determination of success or failure of such action after receipt of notice that corrective action is completed, or
- The CPM shall notify the project owner that coordination with other agencies will require additional time before a determination can be made.

BIO-2: Designated Biologist Duties

CPM approved designated biologist shall perform the following duties: 1) advise the project owner's supervising construction or operations engineer on the implementation of the biological resource Conditions of Certification; 2) supervise or conduct mitigation, monitoring, and other biological resources, such as wetlands and special statutes species; and 3) notify the project owner and the CPM of any non-compliance with any Condition.

Verification: The designated biologist shall maintain written records of the tasks described above, and summaries of these records shall be submitted along with the Monthly Compliance Reports to the CPM.

BIO-3: Utilize Designated Biologist

Project owner supervising and operating engineer shall act on the advice of the designated biologist to ensure conformance with the biological resources Conditions of Certification. The designated biologist shall: 1) tell the project owner and the supervising construction and operating engineer when to resume construction and; 2) advise the CPM if any corrective actions are needed or have been instituted.

Protocol:

The project owner's supervising construction and operating engineer shall halt, if needed, all construction activities in areas specifically identified by the designated biologist as sensitive to assure that potential significant biological resource impacts are avoided. The designated biologist shall:

- Tell the project owner and the supervising construction and operating engineer when to resume construction; and,
- Advise the CPM if any corrective actions are needed or have been instituted.

Verification: Within two working days of a designated biologist's notification of non-compliance with a Biological Resources Condition or a halt of construction, the project owner shall notify the CPM by telephone of the circumstances and actions being taken to resolve the problem or the non-compliance with a Condition. For any necessary corrective action taken by the project owner, a determination of success or failure will be made by the CPM within five working days after receipt of notice that corrective action is completed, or the project owner will be notified by the CPM that coordination with other agencies will require additional time before a determination can be made.

BIO-4: Implementation of Worker Environmental Awareness Program

Project owner to develop and implement a Worker Environmental Awareness Program in which each of its own employees, as well as employees of contractors and subcontractors

who work on the project site or related facilities during construction and operation, are informed about biological resources sensitivities associated with the project.

Protocol:

The Worker Environmental Awareness Program:

- Shall be developed by the designated biologist and consist of an on-site or classroom presentation in which supporting written material is made available to all participants;
- Must discuss the locations and types of sensitive biological resources on the project site and adjacent areas;
- Must present the reasons for protecting these resources;
- Must present the meaning of various temporary and permanent habitat protection measures; and,
- Must identify whom to contact if there are further comments and questions about the material discussed in the program.

Verification: at least 30 days prior to the start of rough grading, the project owner shall provide copies of the Worker Environmental Awareness Program and all supporting written materials prepared by the designated biologist and the name and qualifications of the person(s) administering the program to the CPM for approval. The project owner shall state in the Monthly Compliance Report the number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date.

BIO-5:USFWS Biological Opinion

Prior to construction the project owner shall provide to the CPM final copies of the Biological Opinion per Section 7 of the federal species act obtained from the U.S. Fish and Wildlife Service (USFWS) and incorporate the terms of the agreement into the Biological Resources Mitigation Implementation and Monitoring Plan.

Verification: At least 60 days prior to the start of rough grading, the project owner shall submit to the project CPM copies of the final USFWS Biological Opinion.

BIO-6: Streambed Alteration Agreement

Acquire either a Streambed Alteration Agreement or written verification that this permit is not necessary from the California Department of Fish and Game for project impacts to drainage, and implement the terms of the agreement.

Verification: At least 45 days prior to the start of rough grading, the project owner shall provide the CPM with a copy of the California Department of Fish and Game Streambed Alteration Agreement or written verification that this permit is not necessary for this project.

BIO-7: Approval of BRMIMP

Submit to the CPM for review and approval a final copy of the Biological Resources Mitigation Implementation and Monitoring Plan.

Protocol:

The Biological Resources Mitigation Implementation and Monitoring Plan shall identify:

- all sensitive biological resources to be impacted, avoided, or mitigated by project construction and operation;
- all conditions agreed to in the USFWS Biological Opinion and CDFG Endangered Species Memorandum of Understanding;
- all mitigation, monitoring and compliance conditions included in the Commission's Final Decision;
- all conditions agreed to in the USACE Clean Water Act Permits;
- all conditions specified in the CDFG Streambed Alteration Permit, if required;
- required mitigation measures for each sensitive biological resource;
- required habitat compensation, including provisions for acquisition, enhancement and management, for any loss of sensitive biological resources;
- a detailed plan for protecting the existence and monitoring the integrity of the wetlands remaining on-site;
- a detailed description of measures that will be taken to avoid or mitigate temporary disturbances from construction activities;
- all locations, on a map of suitable scale, of laydown areas and areas requiring temporary protection and avoidance during construction;
- aerial photographs of all areas to be disturbed during project construction activities - one set prior to site disturbance and one set subsequent to completion of mitigation measures. Include planned timing of aerial photography and a description of why times were chosen;
- monitoring duration for each type of monitoring and a description of monitoring methodologies and frequency;
- performance standards to be used to help decide if/when proposed mitigation is or is not successful;
- all remedial measures to be implemented if performance standards are not met; and,
- a process for proposing plan modifications to the CPM and appropriate agencies for review and approval.

Verification: At least 45 days prior to rough grading, the project owner shall provide the CPM with the final version of the Biological Resources Mitigation Implementation and Monitoring Plan for this project, and the CPM will determine the plan's acceptability within 15 days of receipt of the final plan. The project owner shall notify the CPM five working days before implementing any modifications to the Biological Resource Mitigation Implementation and Monitoring Plan.

Within 30 days after completion of construction, the project owner shall provide to the CPM, for review and approval, a written report identifying which items of the Biological Resource Mitigation Implementation and Monitoring Plan have been completed, a summary of all modifications to mitigation measures made during the project's construction phase, and which condition items are still outstanding.

STIPULATED SOILS AND WATER CONDITIONS

WAT-1: Final Erosion Control & Revegetation Plan

Prior to the initiation of any earth moving activities, the project owner shall submit an Erosion Control and Storm Water Management Plan for City of Redlands review and Energy Commission staff approval. The final plan shall contain all the elements of the draft plan with changes made to address the final design of the project.

Verification: The final Erosion Control and Storm Water Management Plan shall address all comments of the City of Redlands Planning Department and be submitted to the Energy Commission CPM for approval at least 30 days prior to the initiation of any earth moving activities.

WAT-2: Storm Water Pollution Prevention Plan

Prior to beginning any clearing, grading, or excavation activities associated with project construction, the project owner will develop and implement a Storm Water Pollution Prevention Plan.

Verification: At least 30 days prior to the start of construction, the project owner will submit to the Energy Commission Compliance Project Manager (CPM) a copy of the SWPPP.

WAT-3: General Industrial Activities Storm Water Permit

Project owner will discard and submit request existing NPDES to operate SARWCB under provisions of the General Industrial Activity Storm Water Permit. SARWCB will submit notice of intent to the State Water Resource Control Board.

Verification: During first year of commercial operation, the project owner will submit to the Energy Commission CPM copies of the Notice of Intent and the new modified Storm Water Pollution Prevention Plan accepted by the State Water Resources Control Board.

WAT-4: Use Flow Meters on Wells and Delivery Systems

The project owner shall ensure that flow meters are installed on project wells such that the total amount of water injected and produced on a monthly basis can be determined. In addition, the project owner shall ensure that separate flow meters are installed on that portion of the water delivery system that is dedicated to providing water to the project owner; and, on that portion of the water delivery system that will be used to provide water to MVPP.

Verification: The project owner shall provide to the CEC CPM and CDFG on a quarterly basis a monthly accounting of the following:

- All groundwater injected into project wells;
- Water pumped from project wells that is supplied to the project owner; and,
- Water pumped from project wells that is supplied to MVPP. The CEC CPM shall provide notice that this material has been submitted to those identified on the project's compliance mailing list.

WAT-5: Limit Lower Aquifer Use to Historical Minimal Levels

MVPP shall limit water from the lower aquifer (Well #1 and Well #2) used for cooling water make-up for both existing and project units to 750 acre/feet per year total.

Verification: 60 days prior to commencement of construction, project owner shall submit plans detailing how quantities of water from the lower aquifer, used for cooling, will be measured. The project owner shall provide a status report on the use of annual make-up water from the lower aquifer to the CPM in its annual compliance report.

WAT-6: Maximize Use of Middle Aquifer and WWTP Water

MVPP shall maximize use of a mixture of secondary effluent water from the City of Redlands wastewater treatment plant and middle aquifer water, blending the two sources, as necessary to comply with Air Quality conditions limiting MVPP's use of middle aquifer water.

Verification: The project owner shall provide a status report on the use of the mixture of effluent water from the wastewater treatment plant and middle aquifer water to the CPM in its annual compliance report. The report shall indicate volumetric amounts of water drawn from middle aquifer and volumetric amounts of water obtained from City of Redlands WWTP.

WAT-7: DHS Treatment Compliance

Prior to use of any water from the City of Redlands Wastewater Treatment Plant (WWTP), project owner shall ensure such water use complies with all requirements with the proposed Department of Health Services (DHS) regulations regarding treatment requirements for reclaimed water used in cooling towers.

Verification: At least 60 days prior to taking any reclaim water from the City of Redlands WWTP. Project owner shall submit a report explaining how compliance of each requirement of the proposed DHS regulations is being met. The report shall indicate the resolution, if any, to issues of applicability and interpretation. The report will indicate where, if any and how, biocidal treatment will be applied to the water.

WAT-8: Direct Connection Permit

Prior to discharge to the SARI line, project owner shall obtain from San Bernardino Valley Municipal Water District, a Direct Connection Permit (DCP) for the SARI line.

Verification: 60 days prior to discharging any liquid to the SARI Line, the project owner shall provide a copy of the DCP to the CPM and to SBRWQCB.

WAT-9: SARI Line Discharge Capacity

Project owner shall obtain and maintain adequate discharge capacity in the SARI line at all times following and prior to first discharge to SARI line.

Verification: At least 60 days prior to discharging any liquid to the SARI Line and thereafter as required in this condition, the project owner shall report:

- Original capacity and any changes in SARI line capacity owned by the project owner; and,
- Any suspected need for an increase in discharge requirements greater than existing SARI Line capacity owned and reasons for the change.

STIPULATED GEOLOGICAL AND PALEONTOLOGICAL CONDITIONS

PAL-1: Designated Paleontologic Resources Specialist

Prior to the start of construction, the project owner shall provide the California Energy Commission Compliance Project Manager (CPM) with the name(s) and qualifications of its designated paleontologic resources specialist and mitigation team members. The designated paleontologic resources specialist is responsible for implementing all the Conditions of Certification and for using qualified personnel to assist him or her in project-related field surveys.

After CPM approval of the Paleontologic Resources Monitoring and Mitigation Plan, the designated paleontologic resources specialist and team shall be available to implement the mitigation plan prior to, and throughout construction of the project.

Protocol:

The project owner shall provide the CPM with the name and statement of qualifications for the designated paleontological resources specialist.

- 1) The statement of qualifications for the designated paleontological resource specialist shall demonstrate that the specialist meets the following minimum qualifications: a degree in paleontology, geology, or paleontological resource management; at least three years of paleontological resource mitigation and field experience in California, including at least one year 's experience leading paleontological resource mitigation and field activities.
- 2) The statement of qualifications shall include a list of specific projects the specialist has previously worked on; the role and responsibilities of the specialist for each project listed; and the names and phone numbers of contacts familiar with the specialist 's work on these referenced projects.
- 3) If the CPM determines that the qualifications of the proposed paleontological resources specialist are not in concert with the above requirements, the project owner shall submit another individual 's name and qualifications for consideration.
- 4) If the approved, designated paleontological resources specialist is replaced prior to completion of project mitigation, the project owner shall obtain CPM approval of the new designated paleontological resources specialist by submitting the name and qualifications of the proposed replacement to the CPM, at least ten (10) days prior to the termination or release of the preceding designated paleontological resources specialist. Should emergency replacement of the designated specialist become necessary, the project owner shall immediately notify the CPM to discuss the qualifications of its proposed replacement specialist.

Verification: At least ninety (90) days prior to the start of construction on the project, the project owner shall submit the name and resume and the availability for its designated paleontological resources specialist to the CPM for review and approval. The CPM shall provide written approval or disapproval of the proposed paleontological resources specialist. At least ten (10) days prior to the termination or release of a designated

paleontological resource specialist, the project owner shall obtain CPM approval of the replacement specialist by submitting to the CPM the name and resume of the proposed new designated paleontological resource specialist. Should emergency replacement of the designated specialist become necessary, the project owner shall immediately notify the CPM to discuss the qualifications of its proposed replacement specialist.

PAL-2: Draft Paleontologic Resource Monitoring and Mitigation Plan

Prior to the start of project construction, the designated paleontologic resources specialist shall prepare a draft paleontologic Resource Monitoring Mitigation Plan to identify general and specific measures to minimize potential impacts to sensitive paleontologic resources. The CPM will review and must approve in writing the draft paleontologic Resource Monitoring Mitigation Plan. After CPM approval, the project owner's designated paleontologic resource specialist and designated paleontologic resource team shall be available to implement that Monitoring and Mitigation Plan, as needed throughout project construction.

Protocol:

In addition to the project owner's adoption of the guidelines of the Society of Vertebrate paleontologists, as modified in the Application for Certification for the La Paloma Generating Project, dated July 1998 (Ex.1; revised November 1998), the project owner shall adopt and implement the BLM's *General Procedural Guidance Manual for Paleontological Resource Management* for those sections of the project determined by the BLM to be under its jurisdiction. When the guidelines overlap, the project owner shall follow the more stringent guideline. The Paleontological Resources Monitoring and Mitigation Plan shall include, but not be limited to, the following elements and measures:

- 1) A discussion of the sequence of project-related tasks, such as any pre-construction surveys, fieldwork, flagging, or staking; construction monitoring; mapping and data recovery; fossil preparation and recovery; identification and inventory; preparation of final reports; and transmittal of materials for curation.
- 2) Identification of the person(s) expected to assist with each of the tasks identified in (a) above, and a discussion of the mitigation team leadership and organizational structure, and the inter-relationship of tasks and responsibilities.
- 3) Where monitoring of project construction activities is deemed necessary, the extent of the areas where monitoring is to occur and a schedule for the monitoring.
- 4) An explanation that the designated Paleontological resources specialist shall have the authority to halt or redirect construction in the immediate vicinity of a vertebrate fossil find until the significance of the find can be determined.
- 5) A discussion of equipment and supplies necessary for recovery of fossil materials and any specialized equipment needed to prepare, remove, load, transport, and analyze large-sized fossils or extensive fossil deposits.
- 6) Inventory, preparation, and delivery for curation into a retrievable storage collection, in a public repository or museum that meets the Society of Vertebrate Paleontologists standards and requirements for the curation of paleontological resources.

- 7) Identification of the institution that has agreed to receive any data and fossil materials recovered during project-related monitoring and mitigation work; discussion of any requirements or specifications for materials delivered for curation and how they will be met; and the name and phone number of the contact person at the institution.

Verification: At least sixty (60) days prior to the start of construction on the project, the project owner shall provide the CPM with a copy of the Monitoring and Mitigation Plan prepared by the designated Paleontological resource specialist for review and approval. If the plan is not approved, the project owner, the designated paleontological resources specialist, and the CPM shall meet to discuss comments and negotiate necessary changes.

PAL-3: Paleontologic Resources Training Program

Prior to the start of construction on the project, the designated paleontologic resources specialist shall prepare an employee training program. The designated paleontologic resources specialist shall submit the training program to the CPM for approval.

Protocol:

The training program will discuss the potential to encounter fossil resources in the field, the sensitivity and importance of these resources, and the legal obligations to preserve and protect such resources.

The training shall also include the set of reporting procedures that workers are to follow if sensitive paleontologic resources are encountered during project activities. The training program will be presented by the designated paleontologic resources specialist and may be combined with other training programs prepared for cultural and biological resources, hazardous materials, or any other areas of interest or concern.

Verification: At least thirty days prior to the start of construction on the project, the project owner shall submit to the CPM for review, comment, and written approval, the proposed employee training program and set of reporting procedures the workers are to follow if Paleontologic resources are encountered during project construction. The CPM shall provide the project owner with written approval or disapproval of the employee training program and the set of procedures within 15 days of receipt of the submittal. If the draft training program is not approved, the project owner, the designated Paleontologic resources specialist, and the CPM shall meet to discuss the comments and work out necessary changes.

PAL-4: Paleontologic Resources Reporting Preparations

Prior to the start of Construction, and throughout the project construction period as needed for all new employees, the project owner and the designated paleontologic resource specialist shall provide the CPM-approved training to all the project managers, construction supervisors, and workers who operate ground disturbing equipment. The project owner and construction manager shall provide the workers with the CPM-approved set of procedures for reporting any sensitive paleontologic resources or fossil bearing sediments that may be discovered during project-related ground disturbance.

Verification: Prior to the start of construction, and throughout the project construction

period as needed for all new employees, the project owner and the designated paleontologic resources specialist shall present the CPM-approved training program on the potential for project impacts to sensitive paleontologic resources. The training shall include a set of reporting procedures for paleontologic resources encountered during project activities. The project owner shall provide documentation in the Monthly Compliance Report to the CPM that the employee training and the set of procedures have been provided to all project managers, construction supervisors, and to all workers.

PAL-5: Measures to Ensure Adequate Paleontologic Resource Monitoring

The designated paleontologic resource specialist shall be present at all times to monitor construction-related grading, excavation, trenching, and/or augering in areas.

Verification: The project owner shall maintain in its compliance files copies of signed contracts or agreements with the designated paleontological resource specialist and other qualified research specialists who will ensure the necessary data and fossil recovery, mapping, preparation for analysis, identification, and inventory, and preparation for and delivery of all significant paleontological resource materials collected during data recovery and mitigation for the project. The project owner shall maintain these files for a period of three years after completion and approval of the CPM-approved Paleontological Resources Report and shall keep these files available for periodic audit by the CPM.

PAL-6: Paleontologic Resource Recovery

The project owner through the designated paleontologic specialist, shall ensure the recovery, preparation for analysis, analysis, identification and inventory, the preparation for curation, and the delivery for curation of all significant paleontologic resource materials encountered and collected during the monitoring, data recovery, mapping and mitigation activities related to the project.

Verification: The project owner shall maintain, in its compliance files, copies of signed contracts or agreements with the designated paleontologic resource specialist and other qualified research specialists. These specialists will ensure the necessary data and fossil recovery, mapping, preparation for analysis, analysis, identification and inventory, and preparation and delivery for curation of all significant paleontologic resource materials collected during data recovery and mitigation for the project. The project owner shall keep these files available for periodic audit by the CPM.

PAL-7: Preliminary Paleontologic Resources Report

The project owner shall ensure preparation of a Preliminary Paleontologic Resources Report following completion of data recovery and site mitigation work. The preliminary report is to be prepared by the designated paleontologic resources specialist and submitted to the CPM for review, comment, and written approval.

Verification: The preliminary report shall include (but not be limited to) preliminary information on the survey report(s), methodology, and recommendations; site records and maps; determinations of sensitivity and significance; data recovery and other mitigation activities; possible results and findings of any analysis to be conducted on recovered

paleontologic resource materials and data; proposed research questions that may be answered or may have been raised by the data from the project; and an estimate of the time needed to complete the analysis of recovered fossil materials and prepare a final report. If no fossil resources were recovered during project construction, the CPM-approved preliminary report shall also serve as the final report and shall be filed with appropriate entities.

PAL-8: Final Paleontologic Resources Report

The project owner shall ensure preparation of a Final Paleontologic Resources Report by the designated paleontologic resources specialist if significant fossil resources are found and recovered during project-related surveys, monitoring and mitigation.

Verification: The project owner shall submit a copy of the draft Final Paleontologic Resources Report to the CPM for review, comment and written approval. The draft Final Paleontologic Resources Report shall be submitted to the CPM within ninety (90) days following completion of the analysis of the recovered fossil materials and preparation of text and related information, such as maps, diagrams, tables, charts, photos, etc.

STIPULATED FACILITY DESIGN CONDITIONS

- STAN-FAC-1: California Building Code**
- STAN-FAC-2: Facility Design Submittal**
- STAN-FAC-3: Building Permit Fees**
- STAN-FAC-4: Assign Resident Engineer**
- STAN-FAC-5: Resident Engineer**
- STAN-FAC-6: Certified Special Inspector**
- STAN-FAC-7: Status of Construction**
- STAN-FAC-8: Final Approval of all Completed Work**
- STAN-FAC-9: Closure/Decommissioning Plan**

Standard Geologic Conditions

- STAN-GEO-FAC-1: Assigning Geologist**
- STAN-GEO-FAC-2: Duties of Geologist**

Standard Civil Conditions

- STAN-CIV-FAC-1: Review and Approval**
- STAN-CIV-FAC-2: Unforeseen Adverse Soil**
- STAN-CIV-FAC-3: Inspections**
- STAN-CIV-FAC-4: Erosion and Sedimentation**

Standard Structural Conditions

- STAN-STRUC-FAC-1: Design Plans and Drawings**

Standard description of condition:

Prior to the start of any increment of construction, the project owner shall submit to the CBO for review and approval the applicable designs, plans and drawings and a list of those projected structures, components and mayor equipment items that will undergo dynamic structural analysis. Design plans and drawings shall be those for:

6. major project structures
7. major foundations, equipment supports and anchorage's
8. large field fabricated tanks
9. turbine/generator pedestal; and
10. switchyard structures

Protocol:

The project owner shall:

6. Obtain agreement with the CBO on the list of those structures, components and major equipment items to undergo dynamic structural analysis;
7. Meet the pile design requirements of the 1995 CBC. Specifically, Section 1807 – General Requirements, Section 1808- Specific Pile Requirements, and Section 1809 – Foundation Construction;
8. Obtain approval from the CBO for the final design plans, specifications, calculations, soils reports, and applicable quality control procedures. If there are

- conflicting requirements, the more stringent shall govern. All plans, calculations, and specifications for foundations that support structures shall be filed concurrently with the structure plans, calculations, and specifications;
9. Submit to the CBO the required number of copies of the structural plans, specifications, calculations, and other required documents of the designated major structures at least 90 days (*or a lesser number of days mutually agreed upon by the project owner and the CBO*) prior to the start of on-site fabrication and installation of each structure, equipment support, or foundation; and
 10. Ensure that the final plans, calculations, and specifications clearly reflect the inclusion of approved criteria, assumptions, and methods used to develop the design. The final designs, plans, calculations and specifications shall be signed and stamped by the responsible design engineer.

Verification: At least 30 days prior to the start of any increment of construction, the project owner shall submit to the CBO, with a copy to the CPM, the responsible design engineers signed statement that the *final design*, specifications and calculations conform with all of the requirements set forth in the Commission Decision.

STAN-STRUC-FAC-2: CBO Requirements

STAN-STRUC-FAC-3: Design Changes

STAN-STRUC-FAC-4: Hazardous Materials

Standard Mechanical Conditions

STAN-MECH-FAC-1: Final Design Drawings

STAN-MECH-FAC-3: Cal-OSHA Requirements

STAN-MECH-FAC-4: Plumbing System Conditions

Standard Electrical Conditions

STAND-ELEC-FAC-1: Electrical Systems Plans

STAND-ELEC-FAC-2: Final Plant Designs

RELIABILITY

N/A

EFFICIENCY

N/A

STIPULATED TRANSMISSION SYSTEM ENGINEERING CONDITIONS

TSE-1: Transmission Facility Compliance

The project owner shall ensure that the design, construction and operation of the proposed transmission facilities will conform to requirements 1a through 1e listed below. The substitution of CPM approved “equivalent” equipment and equivalent switchyard configurations is acceptable. The following conditions will vary by project in terms of technical information.

- f. Breaker ratings
- g. Compliance with short circuit analysis,
- h. CPUC STANDARD Order 95 compliance,
- i. Construction and length of overhead lines,
- j. Termination facilities and substation compliance with Cal ISO and PG&E interconnection standards (CPUC Rule 21).

Verification: At least 30 days prior to start of construction of transmission facilities, the project owner shall submit for approval to the CPM electrical one-line diagrams signed and sealed by a registered professional electrical engineer in responsible charge, a route map, and an engineering description of equipment and the configurations covered by requirements 1a through 1e above. Substitution of equipment and switchyard Configurations shall be identified and justified by the project owner for CPM approval.

TSE-2: Requirements for Changes to Transmissions Facility

The project owner shall inform the CPM of any impending changes, which may not conform to the requirements of 1a through 1e of TSE-1, and request CPM approval to implement such changes. A detailed description of the proposed change and complete engineering, environmental, and economic rationale for the change shall accompany the request. Construction involving changed equipment or switchyard configurations shall not begin without prior approval of the changes by the CPM.

Verification: At least 30 days prior to construction of transmission facilities, the project owner shall inform the CPM of any impending changes which may not conform to requirements 1a through 1e of TSE-1 and request CPM approval to implement such changes.

TSE-3: Inspection Obligation for Compliance

The project owner shall be responsible for the inspection of the transmission facilities during and after project construction and any subsequent CPM approved changes thereto, to ensure conformance with CPUC STANDARD Order 95 and Western’s interconnection standards and these Conditions. In case of non-conformance, the project owner shall inform the CPM in writing of such non-conformance, the project owner shall inform the CPM in writing of such non-conformance and describe the corrective actions to be taken.

Verification: Within 60 days after synchronization of the project, the project owner shall transmit to the CPM an engineering description, one-line drawings of the “as-built” facilities signed and sealed by a registered electrical engineer. A statement attesting to conformance with CPUC General Order 95, Western’s interconnection standards and these conditions shall be concurrently provided. Within 10 days of any non-conformance, the project owner shall submit written notification to the CPM.

ALTERNATIVES

N/A